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Executive Summary

Research Title :

**Implementing Quality
Management in a Chinese Based
Society--Hong Kong**

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Victor H.Y. Lo

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SUMMARY

The research described in this Executive Summary starts from the premise that the implementation of TQM in Hong Kong is primarily focused on the use of individual tools for improvement. However, since 1991, more interest has developed in the holistic approaches, such as ISO 9000.

Information gathered for this research supports the hypothesis that there is a missing quality dimension, namely, that of quality culture, which must obviously be of paramount importance if sustained quality performance is to be achieved.

The second hypothesis explored in this research is that quality philosophies developed in the industrialised West can be better understood and appreciated if they can be explained in terms familiar to Chinese workers and managers, i.e., interpreted in terms of Chinese culture. This should lead to better integration of tools, techniques, holistic quality systems, and general philosophies concerning quality. All this should result in better and more effective implementation of TQM in Hong Kong.

This study can be divided into two parts, A and B. Section A is mainly concerned with the exploration and understanding of the existing Hong Kong situation in terms of quality management implementation. Section B is concerned with the cultural aspects that were identified as being relevant to quality management. These cover Chinese values, Confucian principles, and how these are related to the principles of TQM.

Several behavioural models were studied and the Connor/England model was selected and used to measure the relationship between cultural values and attitudes towards quality behaviour. The work of Professor Michael Bond on Chinese values was combined with the author's own interpretation of Chinese attitudes as expressed in Confucian Principles. This was to better understand quality behaviour intention when viewed from the point of the British Standard 7850 definitions of Total Quality elements.

The Fishbein Behavioural model was also used as part of the survey instrument to measure Chinese attitudes in the implementing of TQM. A computer statistical package was used to analyse the survey data collected from local companies. The statistical factor analysis

identified the working principles which best support TQM implementation in terms of the roles of both the leaders and the supporting staff of a company. The analysis also identified the role of Confucian Principles in terms of helping junior, middle, and senior management to better understand each others' working principles, and thereby promoting harmony and teamwork.

INTRODUCTION

Introduction to the Project

The project takes an "umbrella approach," encompassing the Quality Management field of study.

The main themes

The project contains ten inter-related sub-projects, grouping and linking the two main themes. The first theme explores the current state of the development of quality management in Hong Kong, and the second reports the results of an investigation into the influence of Chinese Culture on Quality Management.

The structure of the project

The project is divided into two sections, A and B, each exploring the two main themes respectively.

Section A: 'Quality Management implementation in Hong Kong.'

This section contains six sub-projects:

A 2.1 The Development of Quality Management in H.K.

A 2.2 Strategic Quality Management in Hong Kong Industries

A 2.3 Using Industrial Engineering in Promoting TQM

A 2.4 Regional Review of Quality Management

A 2.5 The Quality Management Model in Hong Kong

A 2.6 Quality Management & Quality Culture Development in H.K--

A case study

Section B: 'The Chinese Cultural Aspects of Quality Management in Hong Kong.'

This section contains an introductory section, B 3, to the Chinese Value Survey (CVS) plus the following four sub-projects:

B 4.1 The adoption of Confucian Principles in Quality Management- a case study

B 4.2 Application of Lo's Confucian Principle Survey (LCPS) in Hong Kong

B 5 The missing Quality Dimension in a Chinese Based Society-- Hong Kong

B 6 A Chinese Cultural Consideration on Quality Management Implementation in Hong Kong

The logical flow of these sub-projects is illustrated in the following Figure: ES

0.1. This Figure illustrates the underlying two-section model of this Eng. D. research.

Fig. ES 01: The Two-Section Model Illustrating the Eng.D. Project Development

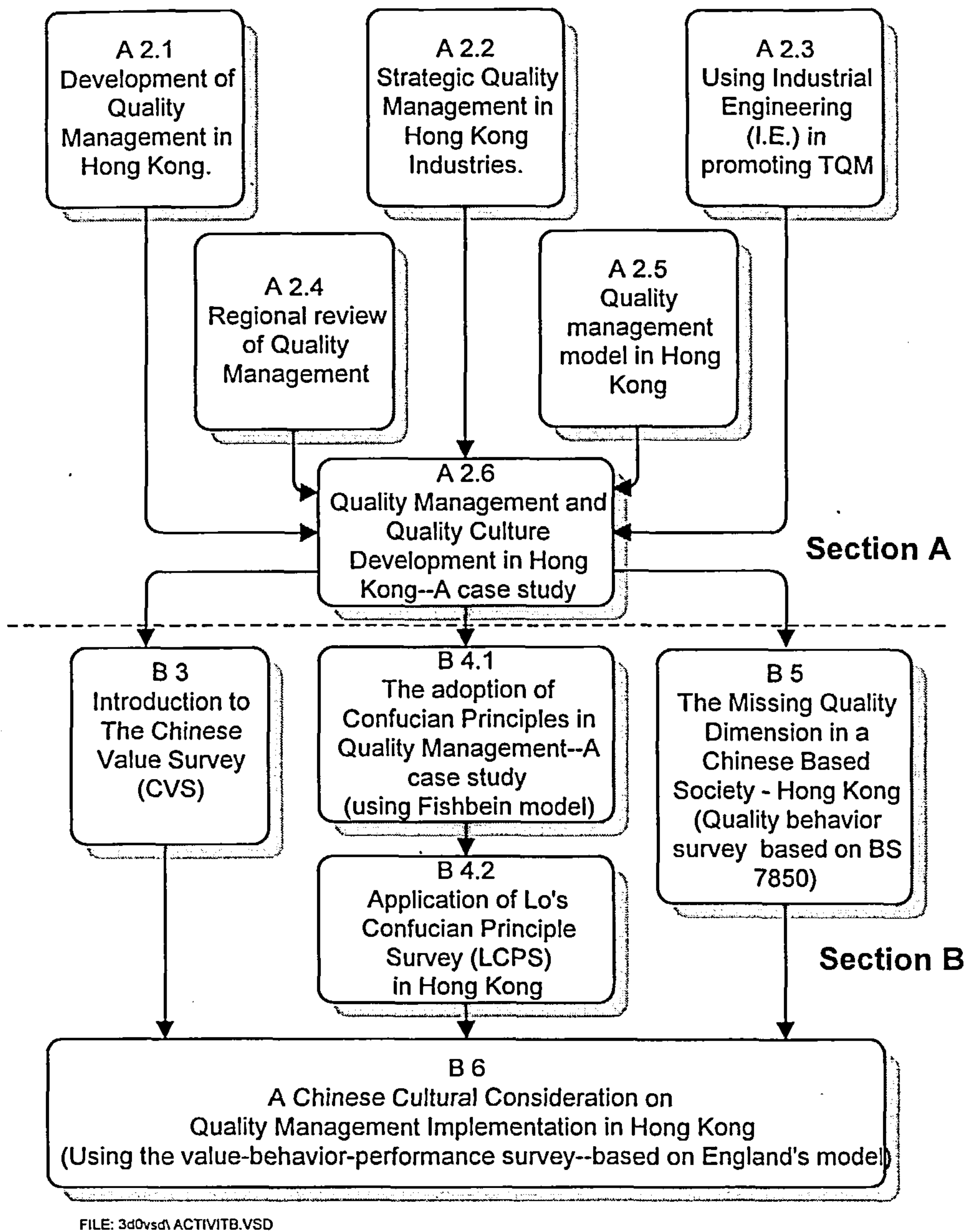


Figure ES 0.1 : The two-section model illustrating the Eng.D. Project development

Overview of section A

This section assesses the current status of TQM applications in Hong Kong. The sub-projects in this section contain the results of some of the surveys conducted in local industries. The aim of these surveys was to acquaint the author with quality management activities in Hong Kong. These studies were exploratory in nature, and it may not be appropriate to emphasize accuracy; qualitative and anecdotal evidence can be quite valuable in these circumstances, and why apply analytical quantitative methods to assess a dynamic and qualitative situation? This section may be seen as a searching process, and the non-rigid approach allowed it to progress quickly and productively. The initial development phases contained in this, on reflection, played a significant role in defining the nature and scope of this Eng.D. research.

The acquisition of knowledge on the status of quality management implementation in Hong Kong is detailed in sub-project A 2.1 (the development of Quality Management in Hong Kong) and sub- project A 2.2 (Strategic Quality Management in Hong Kong Industries). This section also covers three other areas of interest to the author as follows.

First, whether there exist relationships between the author's own discipline and the field of study, i.e., between Industrial Engineering and

Quality Management. This is presented in sub-project A 2.3 (using Industrial Engineering in promoting TQM)

Second is the phenomenal expansion of Hong Kong industries in Southern China, where more than 2 million jobs have been created by Hong Kong based investment. The author had to explore and understand TQM from a regional development point of view, see sub- project A 2.4 (Regional review of TQM)

Third was the development pattern of TQM itself, in particular the holistic process of adopting TQM in Hong Kong companies. A model of TQM implementation was built through this study, highlighting the weak areas of the model for further study, see sub-project A 2.5 (The Quality Management Model in Hong Kong)

To summarise, the functions of Section A were:

- * To formulate a conceptual framework, thus placing the research project within the Hong Kong industry context.
- * To assess if Industrial Engineering knowledge can be used in TQM.
- * To understand the current TQM situation and to build a model of TQM implementation.
- * To build connections and networks with TQM staff local industry, facilitating further research and exploration.
- * To firmly identify the area for the in-depth study presented in Section B.

The first five sub-projects indicated Quality Culture was the weak point. A case study was then be conducted to find out whether any more evidence can be found to support this view. This case study is, in fact, sub-project A 2.6 (Quality Management & Quality Culture Development in Hong Kong--A case study.) Section A served its purpose very well, enabling the author to achieve all the tasks mentioned above. So the most important function of Section A was, in fact, the identification of the intrinsic theme of Section B.

Section A, perhaps not too surprisingly, identified the "people aspect" of quality as being an important factor in the successful implementation of TQM in Hong Kong. It recognized and emphasized that quality is fundamentally dependent on

people. The human side of quality is based on a premise that does not try to order individuals to change, but to lead them and nourish them along the journey of understanding, accommodating, and commitment to quality. Organizational and individual cultures are, obviously, vital elements that affect quality performance. Thus the objective of Section B became clear: to study the relationships between Chinese Culture and TQM implementation in Hong Kong.

In summary, The whole of Section A is composed of a series of six reports written in chronological order, see Appendix ES 1 (Time lines for Eng.D. sub-projects).

Overview of section B

Section B is, in fact, a continuation of the work in Section A. Section A identified the role of people as a critical factor in the success of TQM implementation in Hong Kong. It follows that the national culture must be recognised as an important factor in the performance and effective implementation of TQM. The objective of Section B is, thus, to study the role of Chinese philosophy in relation to TQM in Chinese organizations in Hong Kong.

The sub-theme of section B is to discover the specific cultural characteristics of Chinese managers and engineers with reference to the implementation of quality management in Hong Kong. The sub-projects in this section adopt the methodologies of probability and statistics, psychology, Chinese philosophy, and related cultural studies, to investigate TQM practices in Hong Kong. The Chinese philosophies and cultural values had to be carefully selected and incorporated into this research. This process has given this research its distinctive quality: it attempts to discover the local Chinese cultural characteristics input into the process of adopting Western quality management tools and the related systems and philosophies.

Section B is composed of five sub-projects. Four of them are in-depth studies, while B 3 is an introduction to the value measurement instrument used in the studies, see sub-project B 3 (Introduction to the Chinese Value Survey). Sub-project B 4.1 is a case study which explores the feasibility of using Confucian principles in interpreting Quality Management behaviour in Hong Kong. The general philosophy covered in Confucianism is summarised into a set of 19 Confucian Principles; the Fishbein behaviour model was used to measure the quality behaviour intentions of managers with respect to these 19 principles. A questionnaire was developed incorporating the 19 Confucian Principles and Fishbein behaviour model. The questionnaire was used to study a

wholly owned and managed Chinese company in Hong Kong. Data was collected from 90 members of staff; participation was voluntary. The survey data was analyzed statistically using SPSS. This was followed by a discussion session with the company management. The purpose of the discussion was to improve the interpretation of the survey results. The findings of the study are encouraging, and suggest that some meaningful relations do exist.

Sub-project B 4.2 followed the completion of the pilot case study sub-project B 4.1 (on adopting Confucian Principles in Quality Management). The Lo's Confucian Principles Survey (LCPS) instrument is used to investigate people's quality management philosophy perception in Hong Kong. This sub-project presents the results of the study on the interactions between traditional Confucian philosophies and the intentions to adopt them in quality management by Chinese manager. For the purpose of analysis management is categorized into senior, middle, and junior. The central objective of the study is to understand how Confucianism is perceived and applied by Chinese managers' in a TQM environment.

Sub-project B 5 contains the results of a survey based upon the fundamental concepts of TQM as expounded in BS 7850. The survey measures employees' motivation and behaviour towards practising TQM in Hong Kong. Principle-component factor analysis was employed to analyze the data. Three

factors were identified, namely the technology, the system and the philosophy, with emphasis on different aspects of TQM. Factor scores were then computed and the empirical results confirmed these three dimensions of Quality. The results also suggested that Hong Kong employees were very conscious of the technical aspects of TQM, such as reducing quality losses and continuous improvement. They did not appear to directly emphasize the philosophy/cultural aspect of quality.

Sub-project B 6 is a large scale research survey that uses the England and Connor Behaviour Relationship Model to explore some of the characteristics of quality management in the Hong Kong Chinese society. Via the use of appropriate tools, including the Chinese Value Survey (CVS), the Lo's Confucian Principle Survey (LCPS), and the Management Quality Behaviour (MQB), some characteristics have been uncovered that will be useful to managers in implementing quality management in Chinese based organisations.

This section presents the major studies and results of this Eng. D. research. In particular project B 4.1, B4.2, and B6 form the most significant investigations on Chinese culture and quality management in this study. The duration of these sub-projects, from initial conception to report writing, spanned the whole period of the Eng. D. research. A project time line is shown in Appendix ES 1 (Time lines for Eng.D. sub-projects).

Summary of the (order of reading) submissions

Section A served only as the understanding process for this Eng. D. research; the main body of the research is contained in Section B. The list of sub-projects in terms of size and importance is: Appendix ES 2, followed in order by sub-projects B 4.1, B 4.2, B 5, and B 6. The sub-projects are best read in chronological order, i.e., as illustrated in the next Figure ES 0.2

This Eng. D. research developed and evolved in a dynamic and adaptive fashion, guided by the information discovered and data collected by the author during the life of the entire project. While some sub-projects may be more important than others, they are all part a necessary link in the chain of development. However, the significance of each sub-project in terms of academic content will vary. Appendix ES 2 provides an easy reference of all sub-projects in listed terms and their relative importance.

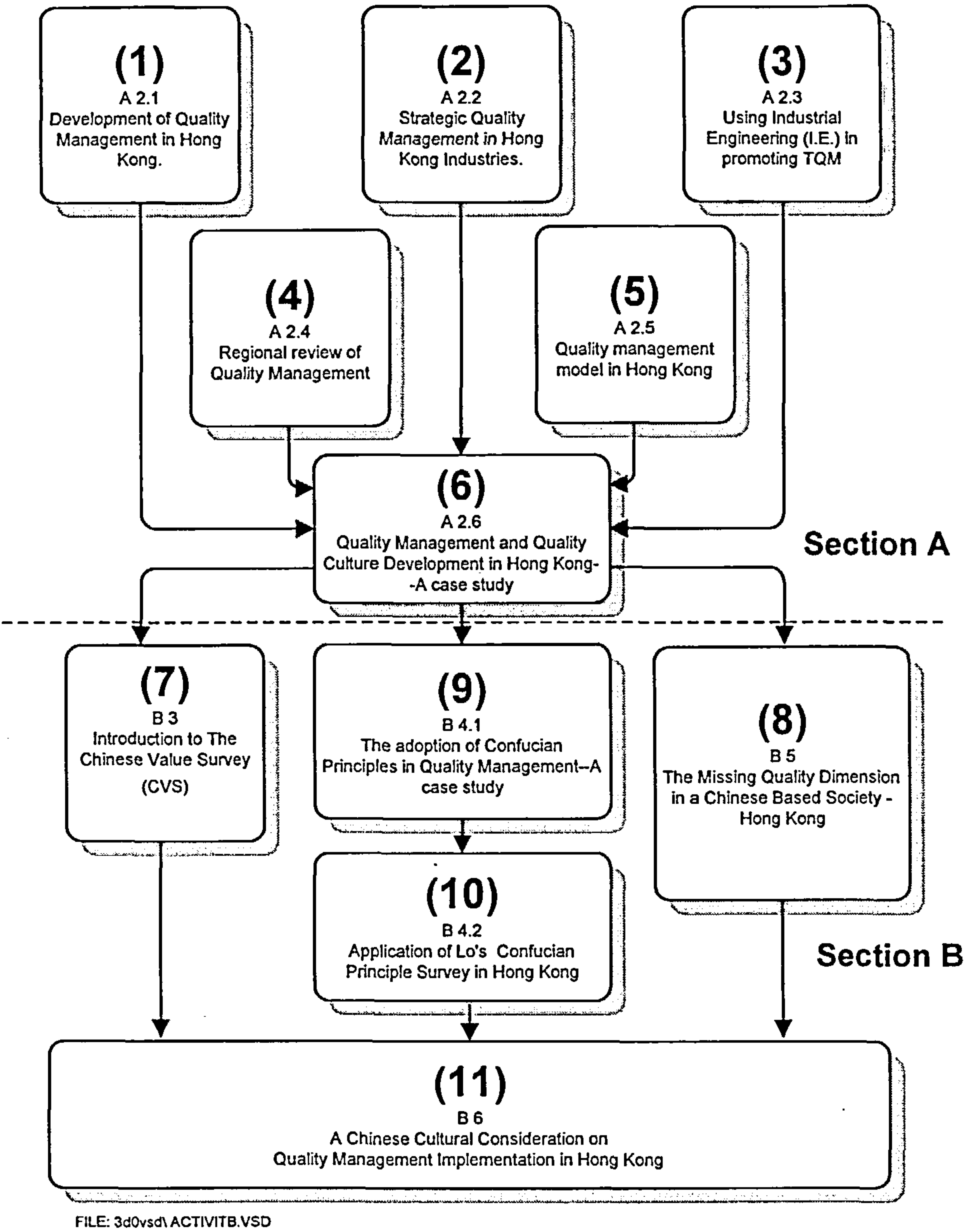


Figure ES 0.2 : The order of reading submissions of the Eng.D. Project

The Eng. D. project background

The project mainly stems from an initial review of the current literature, together with the author's practical experience gained through working in Hong Kong's industries. This project was initiated with the hope of bringing new ideas to Hong Kong which may enhance TQM implementation. The general progress of development and evolution of the project has been good, and many new and interesting ideas were generated as the study progressed. The theme of the project becomes more apparent and better defined as the findings of each of the related studies were completed. Inevitably, some topics were pruned, with some work and ideas being superseded by new ones. The author regarded this as a healthy and natural development and part of any project involving an element of research. For example, the specific topic of "ISO 9000 Quality Assurance System" was superseded and enlarged to accommodate "Confucianism in quality management."

In 1968, the Nobel-prize-winning economist Gunnar Myrdal published a book entitled "Asian Drama" in which he described his investigations into the failure of some the economic development policies in South and Southeast Asia. Twenty years later, the world is experiencing a very different kind of Asian phenomenon: productivity of the countries in the East have become very competitive and they are rapidly reaching economic maturity. Western markets are now flooded with high-quality products "made in Asia," while a decade or more ago the made in Asia label was associated with inferior products. Hong Kong, Singapore, Taiwan and South Korea, because of their rapid economic growth, are called the four dragons. They have been able to achieve this success through the implementation of Quality management.

Hong Kong and its surrounding region of Southern China are no exception to this, with quality management know-how being in great demand. (Lo, V.H.Y. & Sculli, D. 1995). Hong Kong's current Quality management philosophy can best be described as imported and experimental. This is because Hong Kong is at the interface of Eastern and Western culture, and modern quality management philosophies are at first imported from the West and implanted into the Hong Kong Subsidiaries of American and European controlled companies. Local experience in Quality management is usually obtained via trial and error and through progressive modifications, in much the same way as Industrial Engineering techniques were introduced and adapted in Japan in the 50's and early 60's.

The influence of Chinese culture on quality management in Hong Kong has formed the main subject of this study and is reported in a paper by Lo (the author), V.H.Y. & Cheng, T.K. (1997). Hong Kong is predominantly a Chinese society with the customs and culture of Southern China. Colonial rule plus Western commercial culture has produced a veneer of Western style culture which tends to cover the more substantial and deeper Chinese culture. But it is this deep Chinese culture which influences the execution of operational tasks in Quality ceremonial and public events. Hong Kong has its distinctive Chinese philosophy which can be used in promoting Quality management, and which should lead to a specific behavior that is appropriate in the Hong Kong setting. It is the Chinese philosophy which will, in the long term, provide the stimulus for future developments in Quality and productivity improvement in the Chinese based societies, leading to a distinct Quality culture as opposed to an adopted Western one.

Professor Richard Walton (1965), at Harvard University, argues for a change: “Today, in response to massive evidence that control-oriented management models can produce outcomes that subvert the interest of both organization and the people who work for them, a new work force management model is appearing. The premise of the emerging model is that organizations must obtain the commitment of their employees if they are to achieve a sustainable competitive advantage in contemporary market”. The change from a control to a commitment organization model, indeed, is in line with the modern theory of Total Quality Management (TQM). TQM is defined to be a management philosophy and company practices that aim to harness the human and material resource of an organization in the most effective way to achieve quality improvement (BS 7850 :1992: Part I). To successfully establish a quality management system, human behaviour should be well observed since the quality management relies highly on the involvement of all staff, synergy in team work, and self-management. It, therefore, seems reasonable to assume that a Quality Management philosophy built on the existing culture should be more efficient. A heuristic model of the relationship of the Chinese values, Confucianism and QM implementation in Chinese based society is shown in Figure ES1.

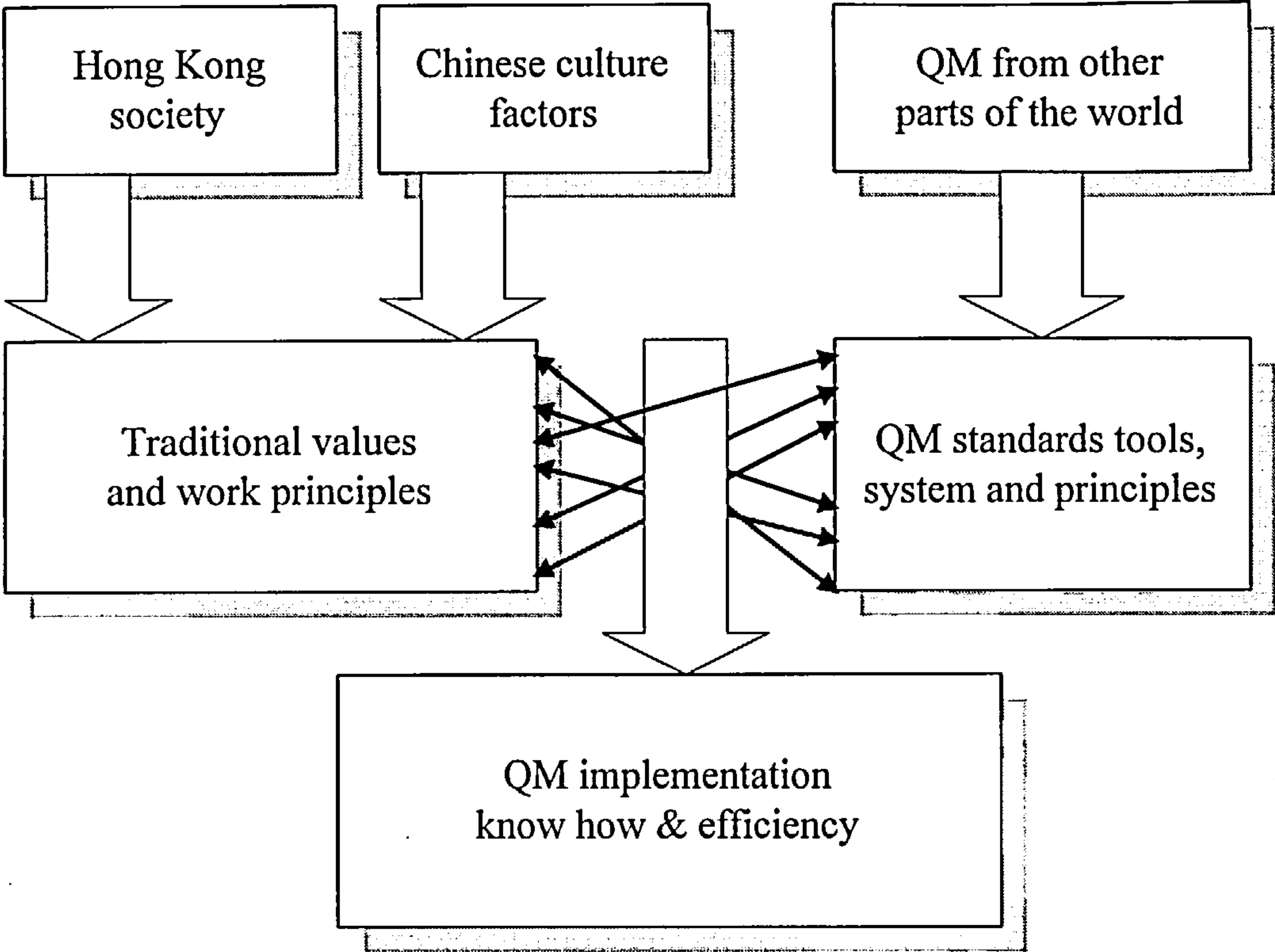


Figure ES1 : A heuristic model of the relationship of the Chinese values, Confucianism and QM implementation in Chinese based society—Hong Kong.

THE RESEARCH

A perspective on the relationship between Quality and Culture in Hong Kong

In today's world of constantly changing economics considerations, quality is more than a noble ideal, it is at the core of how a business must satisfy its customers. Also, more importantly, it is a key determinant in preventing the company from being driven out of business by more efficient competitors. It is, therefore, not surprising that in this day and age, many managers see Total Quality as the focal point of their business.

Modern quality concepts have in fact become a system of holistic behaviour, embracing everyone in an organization. Quality acts as the media which relates the business to the outside world - customers, suppliers, competitors, society, and the environment. Its driving principle is continuous improvement. In addition, any system involving human behaviour must also have a common purpose, shared beliefs, and values. In the context of this report, behaviour refers to how the actions of people working in an organization will manifest themselves given the existing underlying cultural beliefs and values.

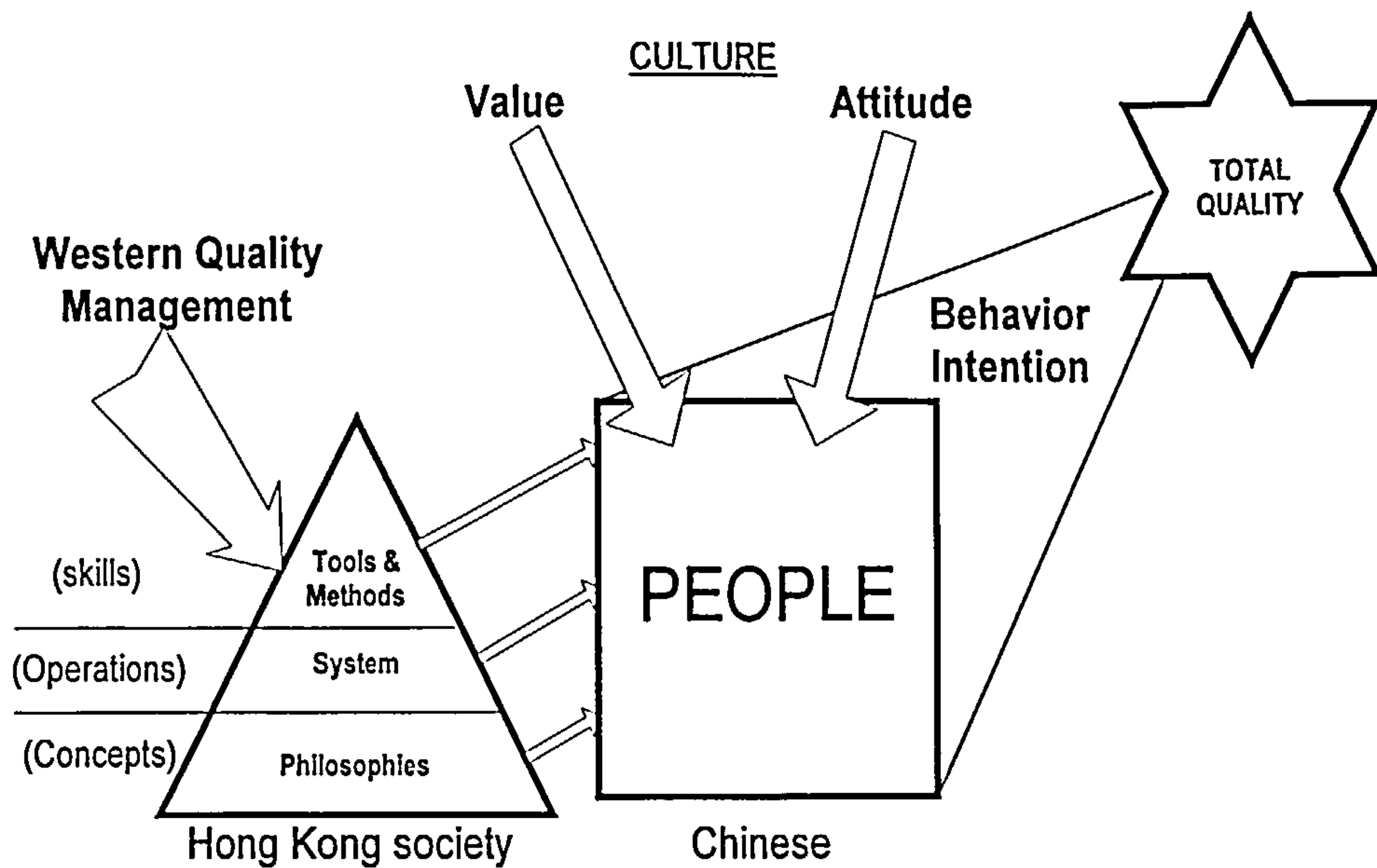


Figure ES 2 : Secret of achieving focal point of Total Quality

Figure ES2 shows that when an external quality management system penetrates into a society, people working in the organization are forced to comply with the requirements of quality management -- philosophy, tools and methods, and system discipline - in order to reach the focal point of Total Quality. It is inevitable that groups of people will develop a common culture involving values and logical concepts that are peculiar to that group. These will result in a specific type of group behaviour which may be called psychological behaviour.

The influence of culture on staff participation in quality management

Better selection, lower prices, and more reliable delivery times are the determining factors of success for manufacturing and engineering related companies. Excellence in management is obviously an important element in promoting the above factors. However, good management is always bi-directional: quality of management depends on the quality of the people and visa versa. This refers to all staff in the organization at all levels; those who manage and those who are managed. Success depends on collective performance, and how people team up and play their individual roles in a coherent and harmonious manner. People working in organizations will obviously want their performance to be positively appraised. It follows that if their work is measured in terms which are not related to the company's Quality Policy, then they will have very little or no motivation to work towards better Quality. The behaviour of people is fundamentally influenced by their common actual/conceived values (Connor 1993). However, due to variability and individual characteristics, people in an organization will respond to their own, self-value systems, which they bring when they join the company. If people want to ensure that organizations respond to quality management principles, one must first be able to identify and clarify the set of related values, and then promote these values along side the quality policy,

i.e., a quality management system is required. The system will encourage staff and facilitate their work toward total Quality excellence. However, it is not an easy task to identify and consolidate a set of common values and attitudes, unless a plan is constructed and management agrees to support the building of a Quality culture suitable for the company. Here “Values” is defined as basic concerns -- their relationships with quality management are not immediately obvious. Managers, and especially top management, must create the necessary climate for the values to take root in the enterprise, requiring some adjustments to the direction of the organization as a whole. “Values” are being regarded as beliefs about what is appropriate and what is not in guiding the actions and behaviour of employees in achieving quality performance (England, G.W. 1967). Values can be considered as forming an ideology that assist in the making quality decisions. One of the aims of this study is to investigate and identify some mean or middle ground which can help Quality Managers understand the path and relationship connecting Values and attitude to appropriate quality behaviour.

Scope of the study

Hong Kong's manufacturing base became a significant contributor to the economy in the early '70, Hong Kong being only a transshipment center before then (Lo, V.H.Y. 1994). The manufacturing base grew rapidly until the mid '80, after which a move to re-locate to Southern China began. Hong Kong is now mainly a financial and services center, serving as headquarters for many manufacturers in Southern China. Many related manufacturing operations are still performed in Hong Kong. These include pre-production planning such as the design of the assembly line; many finishing operations requiring highly skilled labor; and most of the associated control operations such as finance, accounting, distribution, and inventory control.

Quality management has been recognized from the outset by local industrialist as an important way of gaining a competitive edge in world markets. Extensive promotion programs have been launched over the years by Hong Kong Government and other Government subvented organizations such as the Hong Kong Productivity Center (Lo, V.H.Y. & Sculli, D. 1995). This promotion resulted in a vigorous adoption of the Western-style quality management into local organizations. During the process, many local

companies and researchers found that Quality management activities can be classified into three groups (Lo, V.H.Y. & Cheng, T.K. 1997)

The Technology (Technical / Technological / Instrumental)

The System (Systematical / Organizational / Managerial)

The Philosophy (Philosophical / Psychological / Motivational)

Many training and education programmes were, and still are, designed around these three categories. While many of these programmes have been well planned and executed, the results of a case study (see Lo, V.H.Y. & Cheng, T.K. 1997) ,indicate that the notion of quality is not too deeply planted in local companies. Section B5 of the Eng.D. research report titled ‘The Missing Quality Dimension’ describes a new approach to enrich the implementation of quality management in Hong Kong. The early part of this research suggested that it is beneficial to incorporate Chinese cultural aspects in Quality related activities. This, in turn, suggests that the human factors must play an important role in the promotion of quality management. The later stages of this research emphasise Chinese values in quality performance, particularly the Confucian influence. A relationship model (England, G.W. 1967 and Connor, P.E. 1993), is used as a basis for the study. However, it must be stressed that the research focus is on cultural differences and not on the technology. The adaptation of technology to geographical variations can

often be relatively easy, failing to provide a substantial challenge in terms of quality management research.

Value may be thought of as beliefs that support attitudes. Attitudes are cognitive and subconscious orientations towards specific objectives and situations that are collectively seen as a person's behaviour (England G.W. 1978).

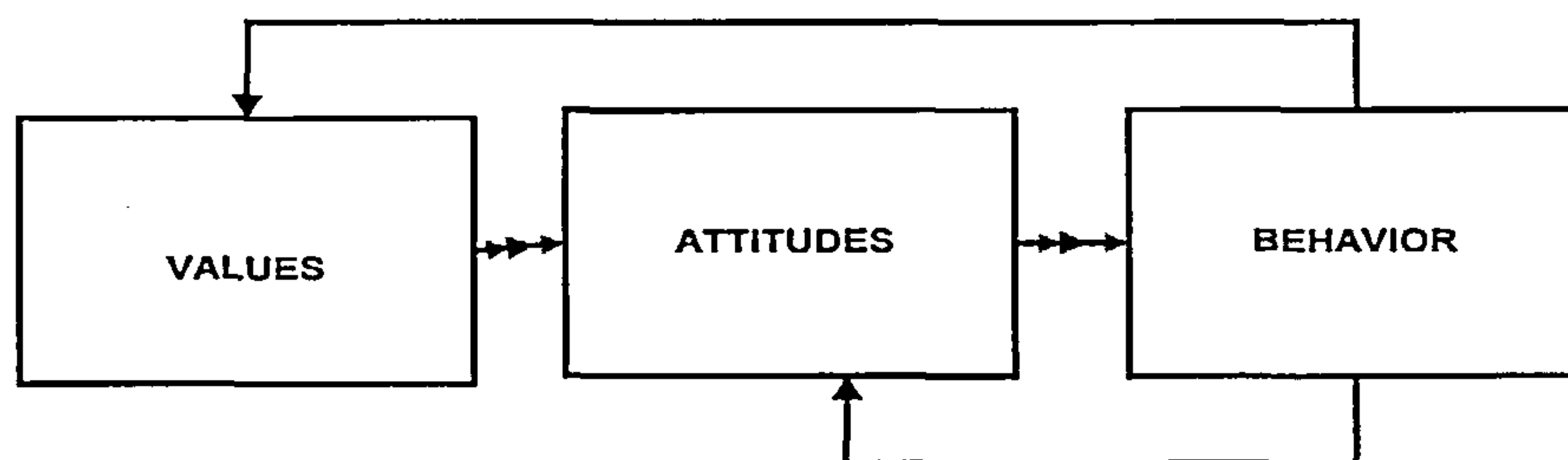


Figure ES 3 : Relationship of Values, Attitude, and Behaviour as recommended by Connor, 1993.

A heuristic model of this study is developed according to Connor's model (Connor, P.E. 1993). The relationship of Values-Attitude-Behaviour put forward by Connor is illustrated in Figure ES3. The model has three components: starting from the understanding of the characteristics of target group's common values, then the study of the Chinese traditional

philosophical principles that affect people’s attitudes, and finally, the quality measurement and its correspondence to peoples’ behaviour when performing well in an organization. The model is presented in Fig ES4.

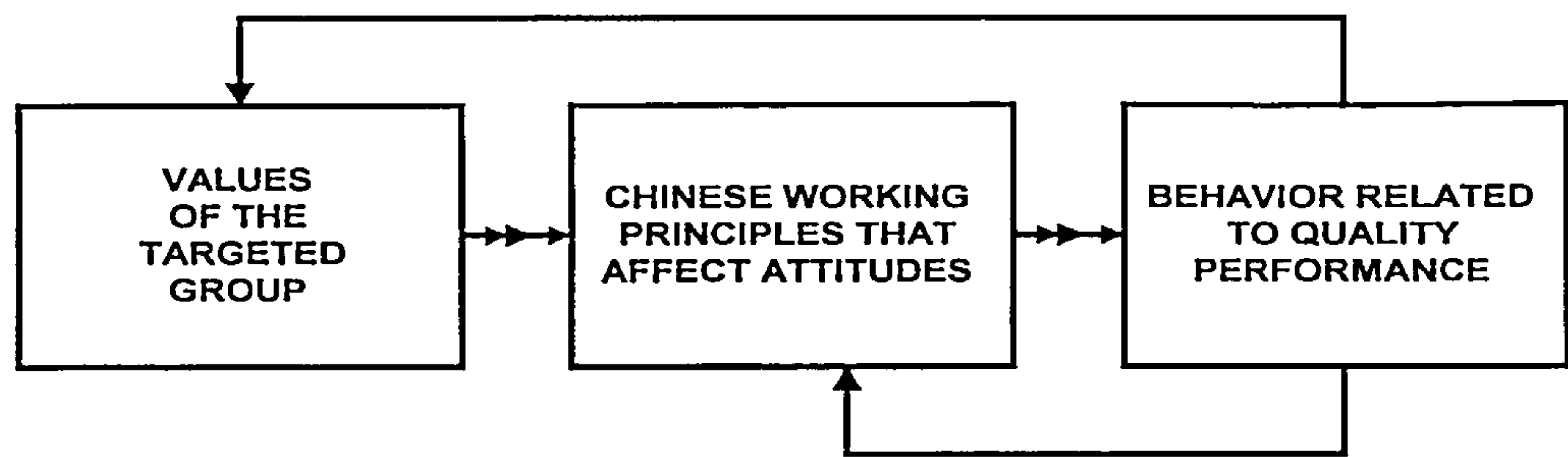


Figure ES 4 : A heuristic relationship model for quality performance

Searching the right instruments and models for the project

After building the conceptual model, it is necessary to first search for and review the information relevant to the construction of the project. It begins with the literature review, where relevant publications are searched to discover whether similar studies been being carried out. At the same time techniques and/or models are considered for possible use in the survey methodology. The reviews focus on three areas, each related to the three blocks as indicated in the relationship model. First, the ‘Values measurement’ are considered, where three major schools of thought are identified as having some proximity. These are all summarized and discussed in report B3—‘Introduction to Chinese Value Survey’. Second, the ‘A Chinese cultural platform for attitudes.’ This aspect seems to be most difficult in terms of the availability of related published materials. Most of the articles found emphasize philosophy and classical scholarship. Many of them are written in difficult ancient-style Chinese. Third, the ‘Quality performance measure.’ This topic is well covered in the published literature, with many papers and books on quality management readily available. Details of the reviews and findings are discussed below:

First of all, it is necessary to look for a ‘Values’ measurement instrument. It starts with a searching of the published work of scholars in the field of values

and culture. The purpose of conducting such a search is to conceptually determine a relevant model which can be used to reveal the values of the people who are likely to be involved in quality management projects. Kluckhohn C. (1951) defines values as “a conception, explicit or implicit... of the desirable which influences the selection from available modes, means and ends of actions”; while Rokeach M. (1968) defined values as “abstract ideas, not tied to any specific object or situation, representing a person’s belief about modes of conduct and ideal terminal modes... that transcendently guide action and judgement across specific objects and situation.” The measurement of values and culture has attracted a considerable number of intellectuals, and the work can be grouped into quite a few schools of thought. As far as this study is concerned, it is necessary to select an effective measurement which fits and adequately serves the purpose of this study. The following developments in this area that have been considered.

The Schwartz Value Survey (SVS) is found to be one of the popular value measurement methods. This is a Human Values Psychology survey developed by Schwartz, Shalom H, and Wolfgang, Bilsky (1990). It evolves the consideration of the nature of human values from the view point of the cognitive representation of three types of human requirements: the biological needs, the social interaction or interpersonal, and the social institutional demand or group welfare. Principal results of this survey focused on ‘Concept or belief

about desirable end states (terminal vs instrumental goals), influences of specific situation guide selection, evaluation of behaviour, determine the order of relative importance.’.

The Rokeach Value Survey (RVS) is another widespread value measurement. This is a seven factor-analytic dimensions model derived by Rokeach M. (1973). The RVS is a structured values instrument, reflecting Rokeach's concept of values. The RVS contain two sets of values, Terminal and Instrumental. “Terminal” values describe desirable conditions, or states of existence, such as wisdom, equality, and salvation. “Instrumental” values describe desirable modes of conduct, for example behaving in a manner that is honest, capable, or loving. Each set consists of a list of 18 distinctive values; within each set, the respondents are required to arrange the 18 values in order of his or her preference. The complete procedure results in two sets of 18 ranked values. Standard methods are employed in the administration of the instrument, while the respondent arranges his or her values in the preferred priority order.

Chinese Values Survey (CVS) is found to be a rather faddish value measurement instrument. This survey was developed in 1987 through some research known as: ‘The Chinese Culture Connection’. The work was carried out by an international network of researchers under the direction of by Michael H. Bond and the study covered 22 countries. The 40 items of Chinese Values

Survey (CVS) were originally developed using the characters of the Chinese language, and later translated into English. The Chinese Culture Connection identified four factors which fell within the CVS instrument. These factors were : Integration (CVS-I), which focus on social stability; Confucian Work Dynamism (CVS-II), which reflects the teachings of Confucius; Human Heartedness (CVS-III), which deals with compassion; and Moral Discipline (CVS-IV), focusing on self-control.

Consideration of the above value measurement instruments suggested that CVS is well suited to the purpose of this study. The main related reasons are:

- * The survey was developed for Chinese societies and it involved Hong Kong.
- * Chinese versions of the values are readily available.
- * The 40 values are concise and easily understood by the target population.

Chinese cultural for attitudes would be an important platform for this research. It was thought that the Japanese culture would be an important factor in the success of Japanese industrial enterprises in applying quality

management. An example of this approach was the seminal work of Ouchi, W. (1981). It recognized that culture can be a most useful tool in uniting the activities of employees, and thus leading to both increased productivity and quality. Cultures are essentially about the control of people's behaviour and ultimately their beliefs, see Payne, R. (1991). Theodorson, G.A. (1969) recognised that attitudes can be distinguished from values, as they focus on specific objects and situations: "Attitude is an orientation towards a certain objective or situation... an attitude results from the application of a general value to concrete objects or situations."

China is well known for her rich philosophical studies, scholars' names such as Loatse, Chaungtse, Confucius, etc., quickly come to mind. Hong Kong is at the cross-roads of East and West, and Hong Kong Chinese managers are well acquainted with the modern quality management philosophies often expounded in Western Business Schools. On top of this, they are grounded in traditional Chinese thinking and culture which forms a catalyst for improving commitment and participation in quality programmes.

Ishikawa, Kaoru (1987) known as the father of Japanese Quality, studied Confucianism in great detail, and came to the conclusion that Japan is strongly influenced by its teachings. Specifically, he recognised the importance of education and held that anyone can become a quality professional if the

appropriate education and training environment are provided. According to the view of the ancient Chinese Philosopher Mencius, the human being is by nature good, so if one can receive proper training and education, one can become a perfect man. The West tends to believe more in some form of innate ability, and an individual may quickly and incorrectly assume that he is not capable of executing certain tasks efficiently and dextrously.

In the Far-Eastern Economic Review (1996), Romagna suggests that one of the six important characteristics of Asian (including Hong Kong) companies is the emphasis of Confucianism, concepts such as family relationships, hard work, and self discipline which in turn leads to receptiveness and openness to western management methods. Many Japanese companies have demonstrated the Confucian influence in their company's spirit, i.e., the use of Confucian ethics in improving working spirit and quality of work.

Bond M. H. & Hofstede G. (1990) in their article 'The Cash Value of Confucian Values, Capitalism in Contrasting cultures' concludes that: "Hong Kong is a place most influenced by Confucian work dynamism." Redding, S.R. (1994) also recognized Confucianism is the main platform of Chinese ethic, a common social force though Pacific Asia. It serves to maintain sensitivity to hierarchy and the maintenance of social order via micro units of society, such as families.

In this study, the behaviour of Hong Kong managers and engineers will be test for the feasibility of adopting nineteen selected pragmatic principles -- extracted from Confucian Chinese philosophy -- in quality management.

References on Quality Management performance criteria

Traditionally, performance measures have been derived from cost accounting information and are often based on outdated and arbitrary principles. These provide little motivation in supporting attempts to introduce TQM, and may actually inhibit continuous improvement because they are unable to map process performance. Emerging from the quality management evolution, various quality performance measures' criteria are developed in a novel manner. Three approaches are selected to evaluate their suitability in using them as quality performance measures in this study.

The Deming Prize and the Baldrige Award have been considered to be quality performance references. The Deming Prize judging criteria consist of a checklist that is broken down into ten major categories: policy and objectives, organization and its operation, education and its extension, assembling and disseminating information, analysis, standardization, control, quality assurance, effects and future plans. The Baldrige awards are built on the following core concepts: Customer-driven quality, leadership, continuous improvement, full participation, fast response, design quality and prevention, long-range outlook, management by fact, partnership development and public responsibility.

Juran, J. (1989) suggested the following checklist that can be used to reflect the quality performance of an organization. These include 'Replacement of imports, motivation of workers, quality circles, statistical process control, quality awareness of managers, calculation of quality cost, quality improvement projects, complete and precise documentation of procedures, restructuring the organization, and restructuring the organization.'

The British Standard 7850 for Total Quality Management (TQM), is found to be a popular quality performance criteria testimonial, It states that there are 10 fundamental concepts which should be considered when applying the principles of TQM--(BS 7850: Part 1:1992). They are Commitment, Customer satisfaction, Quality losses, Participation by all, Process measurements, Continuous improvements, Problem identification, Alignment of corporate objectives and individual attitudes, Personal accountability, Personal development. These fundamental concepts have taken into consideration both the 'technical' factors (such as quality losses, continuous improvements) and 'human' factors (such as commitment, personal accountability and development) of TQM. It summarises the teachings of different gurus and proposes those fundamental concepts as a 'standard' for TQM implementation.

Out of these three, the BS 7850 approach is regarded as the most suitable for this study. The following are supporting reasons:

- * It is a national standard with guaranteed reliability.
- * It is specially designed in a TQM context, and is in-line with the objectives of this study.
- * The standard provides unique and non-ambiguous principles of TQM.
- * The related references are accessible to most readers and survey users.

Demonstrate innovation in the application of knowledge to the engineering profession

The innovation of the research is in the merging of two fields, namely the "Chinese culture and philosophy" and "Quality Management." For details of innovation evidence, please refer to document "Eng. D. Personal Profile--Victor Lo."

In order to further illustrate the project's innovative features, application in the engineering business environment with ten key points are extracted and summarised in the following sub-headings:

1. The establishment of Confucian Principles
2. Adoption of a 'Psychological behaviour model' in Quality culture measurement
3. The establishment of 'Lo's Confucian Principles Survey' (LCPS) instrument
4. The significance of Confucian Philosophy in QM
5. Gap analysis on Confucian Principles on the three-layer management hierarchy
6. The Quality Management Grid based on Confucian Principles
7. The Missing Quality Dimensions in Hong Kong
8. The establishment of a causal model on Quality Behavior Intention based on the Connor' model , 1993
9. The establishment of a causal model on Chinese Values and Quality Behavior
10. The effect of Chinese culture on Quality Behavior

The establishment of Confucian Principles

Confucianism is an integration of a school of thought that originated before Confucius. Confucius sought to reintroduce order to the nation some two thousand five hundred years ago by teaching and interpreting the ancient classics. Confucianism mainly refers to a number of doctrines stressed by Confucius and his followers, which embraced broad and vague concepts. In order to be able to use Confucianism in today's Quality Management, a set of Confucian Principles had to be developed by the author.

A list of practical Confucian principles was extracted from the traditional Chinese teachings in philosophy; the final list consists of 19 Confucian Principles. The process involved in the selection and development of the list consists of the following three phases.

The first phase involved a search and extraction of working principles from the traditional Chinese philosophy literature. However, most of the literature emphasises classical philosophy, and is not easily summarised into simple discrete principles. Moreover, most of the literature is written in ancient Chinese (classical characters) and can be extremely difficult to read and interpret.

The second phase involved inviting experts in Chinese philosophy from Hong Kong's universities to assist in summarising the old, complex Confucian principles into clear distinct statements rooted in working principles. This interpretation effort identified a total of twenty representative Confucian principles.

The third phase involved meetings with quality management experts in Hong Kong industry. The target persons were Chinese with at least ten years of experience in quality management. A typical team consisted of three senior quality management consultants and two quality directors. The discussions centered around the plausibility of interpreting the Confucian principles in terms of quality endeavor. It was suggested that two of these principles should be combined, giving a final list of 19 Confucian working principles.

The list of pragmatic principles extracted from traditional Confucian philosophy to form the final list of useful working principles is by no means complete, and does not cover all Chinese nor all Confucius philosophies. Detailed explanations of these nineteen principles can be found in Appendix ES3. The list may well be biased, but it was chosen for this study by the author with the general intention of reinforcing the human aspects of quality such as value of duty, self-discipline, and loyalty. The list was used in a case study to investigate which of the 19 Chinese Confucian philosophy principles

most significantly influence the implementation of modern quality management in Hong Kong. The key finding of this sub-project reveals that Confucian Principles are being used by Chinese management in the implementation of modern quality management. It is important to notice that all of the 'Behavior Intention' scores are in positive range, which strongly rejects the null hypothesis -- in other words, it is rejected that Hong Kong Chinese managers do not consider Confucian Principles relevant to Quality Management. Further information about the case study can be found in sub-project B 4.1 of the Eng.D. submission.

Adoption of a 'Psychological behaviour model' in Quality culture measurement

The Fishbein Behavioural Intention (FBI) model (frequently referred to as the Theory of Reasoned Action) was selected for this study. Fishbein and Ajzen (1975, 1980) describe the work as a theory designed to explain virtually any human behaviour in which a person's intention is a function of two basic determinants, one personal in nature and the other reflecting social influence. Engel, Blackwell, and Miniard(1986) refer to this model as the most widely known behavioral intention model. This model was employed to measure the behaviour intention of using Chinese philosophy and concepts in the field of quality management in Hong Kong.

The basic paradigm of the FBI model is that behaviour is affected by behaviour intention (BI) which, in turn, is affected by Attitude(Aact) and Subjective Norm(SN). The theory assumes that the relative importance of attitude towards behaviour and subjective norm depends largely on the issue itself. A relative weight of the attitudinal and normative factors is, thus, suggested as follows:

$$\text{Behavior} \sim \text{BI} = (\text{Aact})w_1 + (\text{SN})w_2$$

The weights in the equation, w_1 and w_2 , can be empirically determined. In this study, the influences of the respondents' belief and those of their colleagues are considered to be of equal importance. In order to reflect this view of the two determinants, w_1 and w_2 were set to unity.

The first component, A_{act} , is a function of the perceived consequences that people associate with the Behaviour (B). The Evaluation of these consequences (E), is defined as follows:

$$A_{act} = \sum_{i=1}^n (B_i * E_i)$$

where:

B_i = the person's belief that performing the behaviour with result of i

E_i = the person's evaluation of the outcome of i

n = the number of salient beliefs

The second component, the Subjective Norm (SN), is represented as a function of beliefs about the expectations of the importance of referent others, the Normative Beliefs (NB), and his/her motivations to comply (MC) with these referents. Referent here means the individuals or groups who work closely with the person in question. This relation is as follows:

$$SN = \sum_{j=1}^n (NB_j * MC_j)$$

where :

NB_j = the normative belief that a referent j think that he/she should perform

MC_j = the motivation to comply with the influence of referent j

n = number of salient normative beliefs

The model proposed here has been extensively used in the human behaviour literature. Most support is primarily derived from the ability to predict intentions, see Minard and Cohen(1981). Existing evidence is also largely supportive of the causal flow hypothesized by the FBI model. The need to include Aact and SN as moderating variables for Bi, Ei, and BI; the NBj's; and for the MCj and BI relationships was verified by Sheppard(1988).

The model - the Fishbein and Ajzen theory of Reasoned Action - is schematically illustrated in Figure ES 5. This model is used to ascertain whether the principles of Chinese philosophy can be usefully employed in Quality Management in a Chinese based organization.

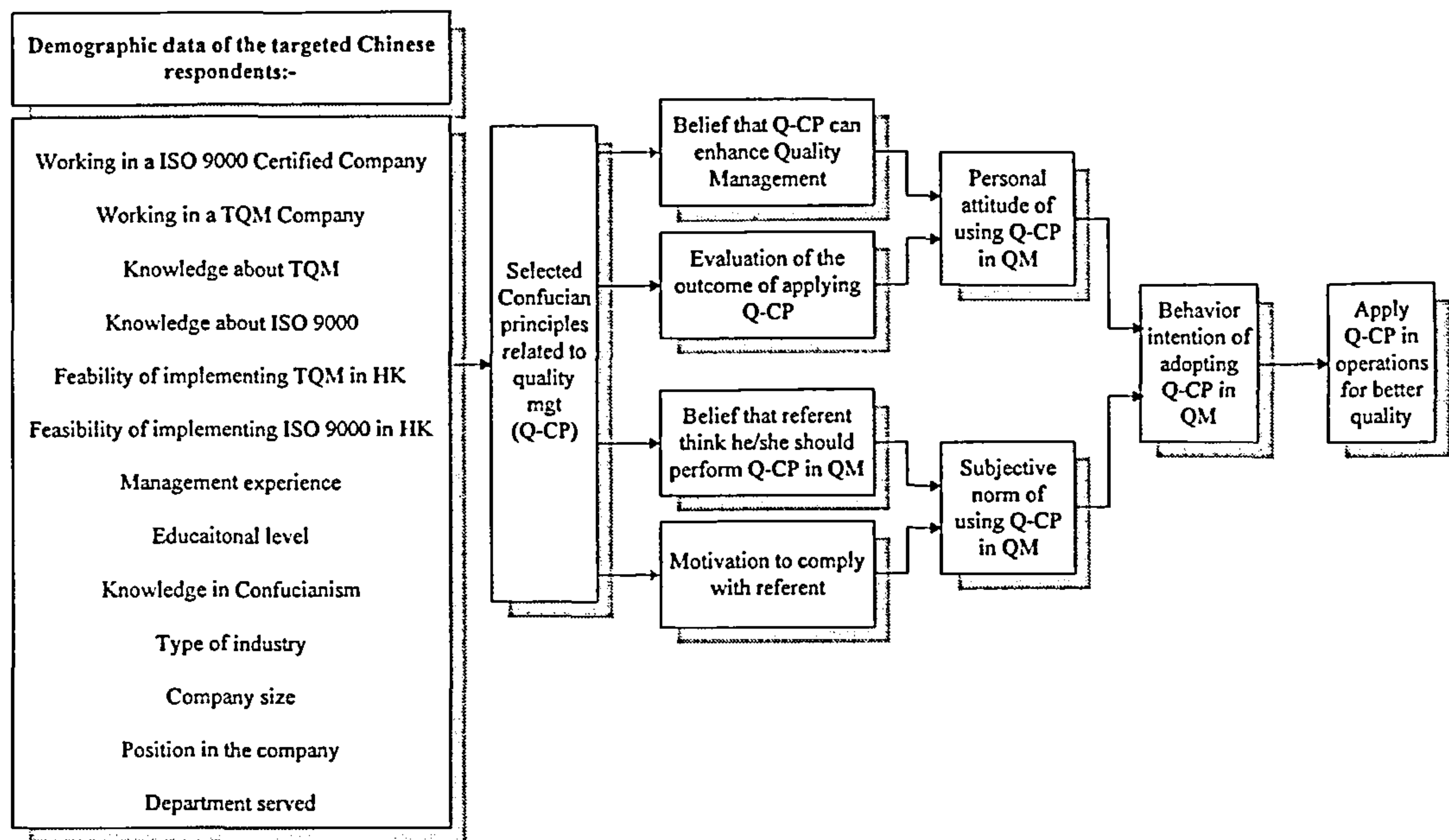


Figure ES 5 : The Study model on adopting Confucian Principles in Quality Management (QM) in a Chinese Based Society, using “in a Chinese Based Society using Fishbein and Ajzen’s Theory of Reasoned Action”

The components of the Fishbein Behaviour Intention model used in this study are defined as follows.

Belief(Bi)

Beliefs about the outcomes of using selected Chinese philosophy principles are measured by asking respondents on a seven point scale: unlikely to likely(1-7 points). The likelihood of each outcome of these principles is gauged.

Evaluation(Ei)

The evaluative component corresponding to the beliefs is measured by asking respondents to evaluate the consequences of each belief item on a seven point scale ranging from very bad (-3) to very good (+3).

Normative Belief(NB):

To measure the normative beliefs, subjects are asked to indicate on a seven point scale that the referent (including top management, peer and subordinates) thinks they should act according to the Confucian principle in question. A seven-point scale ranging from very unlikely (-3) to very likely (+3) was used.

Motivation to Comply(MC):

Motivation to comply with referents is measured on a seven-point: from not at all to very much on a 1-7 points scale. Assessed by asking the subject to indicate how much they want to associate with what the referent thinks they should do.

The establishment of 'Lo's Confucian Principles Survey' (LCPS) instrument

This is a case study to explore the feasibility of using Confucian principles in interpreting Quality Management behaviour in Hong Kong. The general philosophy covered in Confucianism was summarised into a set of 19 Confucian Principles, and the Fishbein behaviour model was used to measure the quality behaviour intentions of managers with respect to these 19 principles. A questionnaire was developed incorporating the 19 Confucian Principles and Fishbein behaviour model, and it was used to study a wholly owned and managed Chinese company in Hong Kong. Data was collected from 90 members of staff; participation was voluntary. The survey data was analysed statistically using SPSS.

As a result of the case study (pilot test) - findings were confirmed through discussions with local industrialist. The high Cronbach alpha reliability coefficient computed from the data base also suggests that the questionnaire is a valid and reliable instrument in measuring Confucian Principles in Quality Management. However, the results of this study are limited by the fact that this was a single case study, and may not be able to reflect the general situation on the role of the influence of Confucian Principles on Quality management. It was, therefore, necessary to undertake the next sub-project studies (sub-project 4.2) in Chinese based organizations

in Hong Kong in order to reinforce the initial findings that relationships between Confucian Principles and Quality Management do exist.

The significance of Confucian Philosophy in QM

All the 19 selected Confucian principles listed in Appendix ES 6 were identified as having a positive effect in the implementation of quality management in Hong Kong. Although the 19 LCPs have different degrees of acceptance, an affirmation on the significance of Confucian Philosophy in Quality Management in a Chinese based society has been established. Most Hong Kong managers think that the central spirit of Confucianism is the learning spirit. Man forms the prime subject of Confucianism. The development of man and the improvement of human society in its ever-widening circles are its sole aim and effort. The four progressive steps in moral development are: self-cultivation (or pruning the self), ordering the family, governing the country, and harmonizing the world. In order to accept higher responsibility, one should develop oneself progressively. Self-cultivation forms the most crucial foundation in Quality Management and the way to accomplish self-cultivation is by continuous learning. LCP01 is found to have a significant positive relationship with people's characteristics such as their educational attainment, their management experience, the level of their position, their knowledge of Chinese philosophy, and their attitude and knowledge of TQM. To summarise, the more knowledge and experience a person has of quality management, the more will he/she recognize the value of learning in respect of quality improvement.

Gap analysis on Confucian Principles on the three-layer management hierarchy

In this study, the management of the target companies was divided into three layers for the purpose of analysis. These three levels of management have to work very closely in order to run a good quality organization. However, due to the different job nature associated with each level, responses on the significance of Confucian Principles in Quality management vary. Gaps in the working principles of the three levels of management will hamper a progress towards smooth quality processes. This study has mapped the gaps among the three levels of management, see Figure ES 6. This will help managers to identify these gaps and to make the necessary adjustments to close them. It is safe to conclude that the cultivation of harmonized working principles in an organization will certainly help improve internal operations, and thus help the company to become more competitive in the market place.

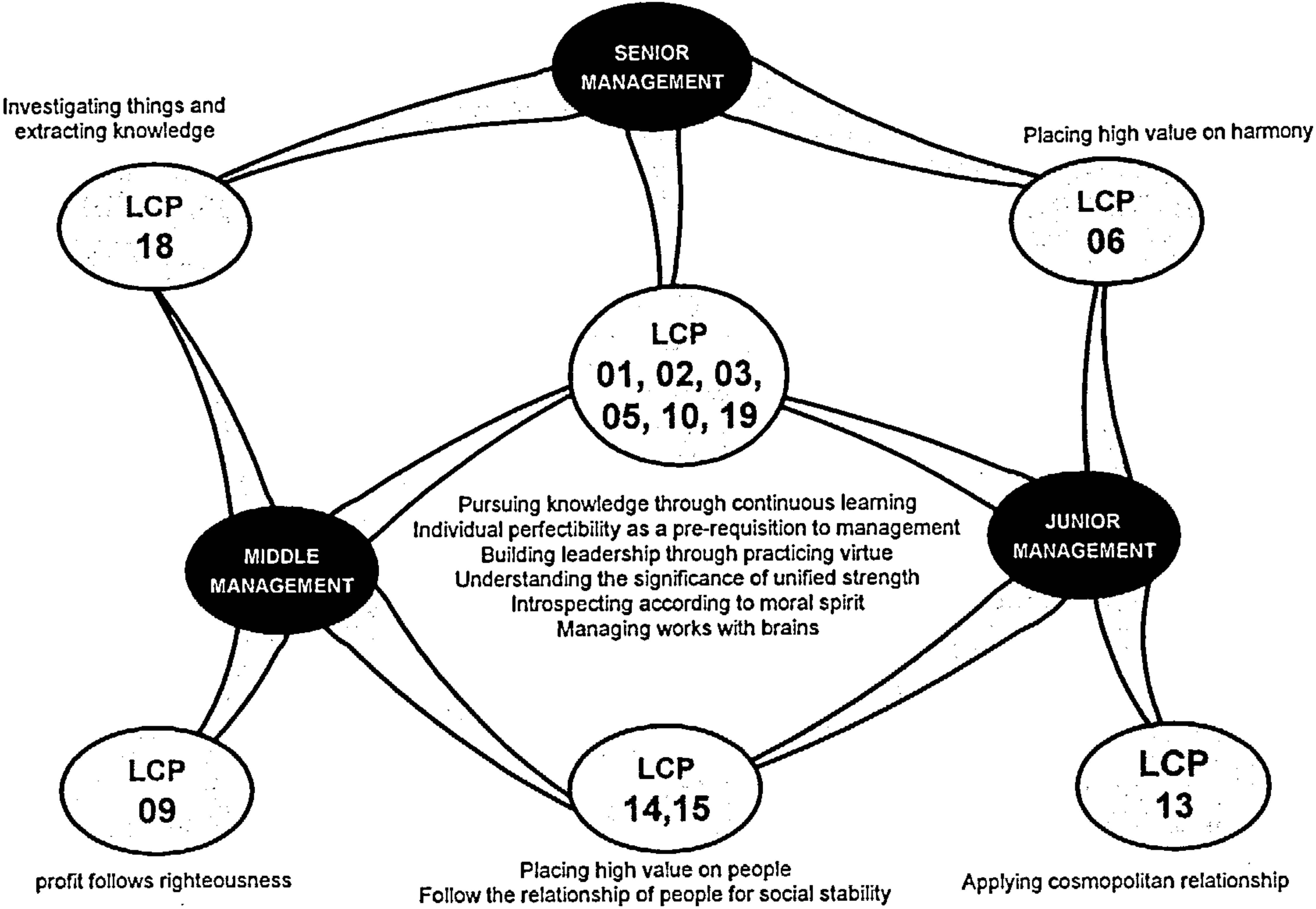


Figure ES 6 : The 'Gap diagram' of top 10 LCPs existed among each of the three levels of management

The Quality Management Grid based on Confucian Principles

This study primarily serves as a first attempt to investigate people's managerial perception of Confucian based Chinese philosophy on quality management. The results of the finding support the proposal that the Confucian philosophy is a useful and practical factor in enhancing quality management. Based on the results of factor analysis using Kaiser Normalization, a Quality Management Grid (QMG) of Confucian principles was developed as shown in Figure ES 7. It suggests that the practice of Chinese managers in the management of quality is along two axes, the vertical "Rank Axis" which represents the relationships between the leaders and everyone else in the organization, and the horizontal "Bunch Axis" which links collectivism and ego. The four factors shown in Figure ES7 are as follows.

Factor 1 contains Confucian principles that Chinese managers find them suitable in terms of behaviour when dealing with large groups of Chinese colleagues--The Benevolent Kingship Dimension.

Factor 2 covers self-restraining principles using virtue as the basic foundation. Good Quality leaders must be able to think about and rethink their

acts in accordance with these principles and guiding rules--The Virtuous Introspection Dimension.

Factor 3 contains attitude principles which Chinese managers would expect every body in the organization to observe, including senior and junior managers, and they regard these moral principles as an important motivating force in group dynamism--The Moral Dynamism Dimension.

Factor 4 comprises principles that every person in the organization must try to honour as basic personal requirements for membership of a Quality team--The Self Erudition Dimension.

The Chinese QM Grid can be used as a quality behavior check map. Managers' attitudes towards quality management are mapped according to each Confucian principle in the four domains. It is suggested that if managers can follow the principles and behave according to the domain quadrants -- The Benevolent Kingship Dimension, The Virtuous Introspection Dimension, The Moral Dynamism Dimension, and The Self Erudition Dimension -- the cultural input into TQM can be secured and effective teamwork becomes possible.

LEADER

<div>Factor 1</div> <div><u>BENEVOLENT KINGSHIP</u></div> <div>CP5 Ming Fen Shi Qun</div> <div>CP9 Yi Yi Sheng Li</div> <div>CP10 Fan Qiu Zhu Shen</div> <div>CP13 Tian Xia Da Tong</div> <div>CP14 Yi Min Wei Gui</div> <div>CP15 Jiao Zhi Yi Lun</div> <div>CP19 Xin Zhe Zhi Ren</div>		<div>Factor 2</div> <div><u>VIRTUOUS INTROSPECTION</u></div> <div>CP2 Xiu Shen Zhi Guo</div> <div>CP3 Yi De Fu Ren</div> <div>CP4 Yi Li Zhi Guo</div>
COLLECTIVE		EGO
<div>Factor 3</div> <div><u>MORAL DYNAMISM</u></div> <div>CP6 Yi He Wei Gui</div> <div>CP7 Zun Zhong Tian Dao</div> <div>CP8 Zhong Yong Zhi Dao</div> <div>CP12 Ren Zheng An Ren</div> <div>CP16 Zhang You You Xu</div> <div>CP17 Tu Fa Bu Zu</div>		<div>Factor 4</div> <div><u>SELF ERUDITION</u></div> <div>CP1 Xue Er Zhi Zhi</div> <div>CP18 Ge Wu Zhi Zhi</div> <div>CP11 Jiao Zhi Yi Dao</div>

EVERYBODY

Figure ES 7 : Quality Management Grid Based on Confucian Principles, developed from the Result of 232 respondents using VARIMAX rotation Factor Analysis)

The Missing Quality Dimensions in Hong Kong

Empirical studies concerning the perceptions of concepts and dimension in terms of the application of Chinese philosophy are rare. This research project has investigated the perceptions of TQM concepts amongst Chinese employees in the Hong Kong workplace. Three factors have been identified from the analysis performed on the data collected from the more than 200 industrial managers. The three factors are:

Factor 1: The "technical/technological/instrument" dimension of TQM.

Factor 2: The "systematical/organizational/managerial" dimension of TQM.

Factor 3: The "philosophical/psychological/motivational" dimension TQM.

Factor 1 had the highest score, followed by Factors 2 and 3, see Table 5.5 in sub-project 5. The results indicate that the Technical aspect was perceived as the most important part of TQM, followed by the Systematical and the Philosophical factors. The important function of TQM and Quality was perceived to be a reduction in losses in the production process, i.e., to improve the processes and to identify potential and existing production problems. Quality control charts, statistical process control and TQM technical tools that have a tangible and visible effect in assisting daily operations were perceived as the most crucial and important.

The establishment of a causal model on Quality Behavior Intention based on Connor' model , 1993

A quality management study model was developed to explore people's values, attitudes, and behaviour in relation to quality. It was hoped that the data collected for the model under study could be analyzed and so provide some relevant information on which to build a causal model, called the Quality Management Implementation Model, see Figure ES 8. The function of this causal model was, in turn, to provide some indication of the strategies required to improve the effectiveness of the implementation of Quality Management.

In this sub-project, an attempt was made to link Chinese culture with the implementation of TQM. The hypothesis of the research starts with people's general mental attitudes, then, if these cultural factors correlate with the concepts of TQM, they can then be reinforced and developed to form the corporate core values of the quality management task.

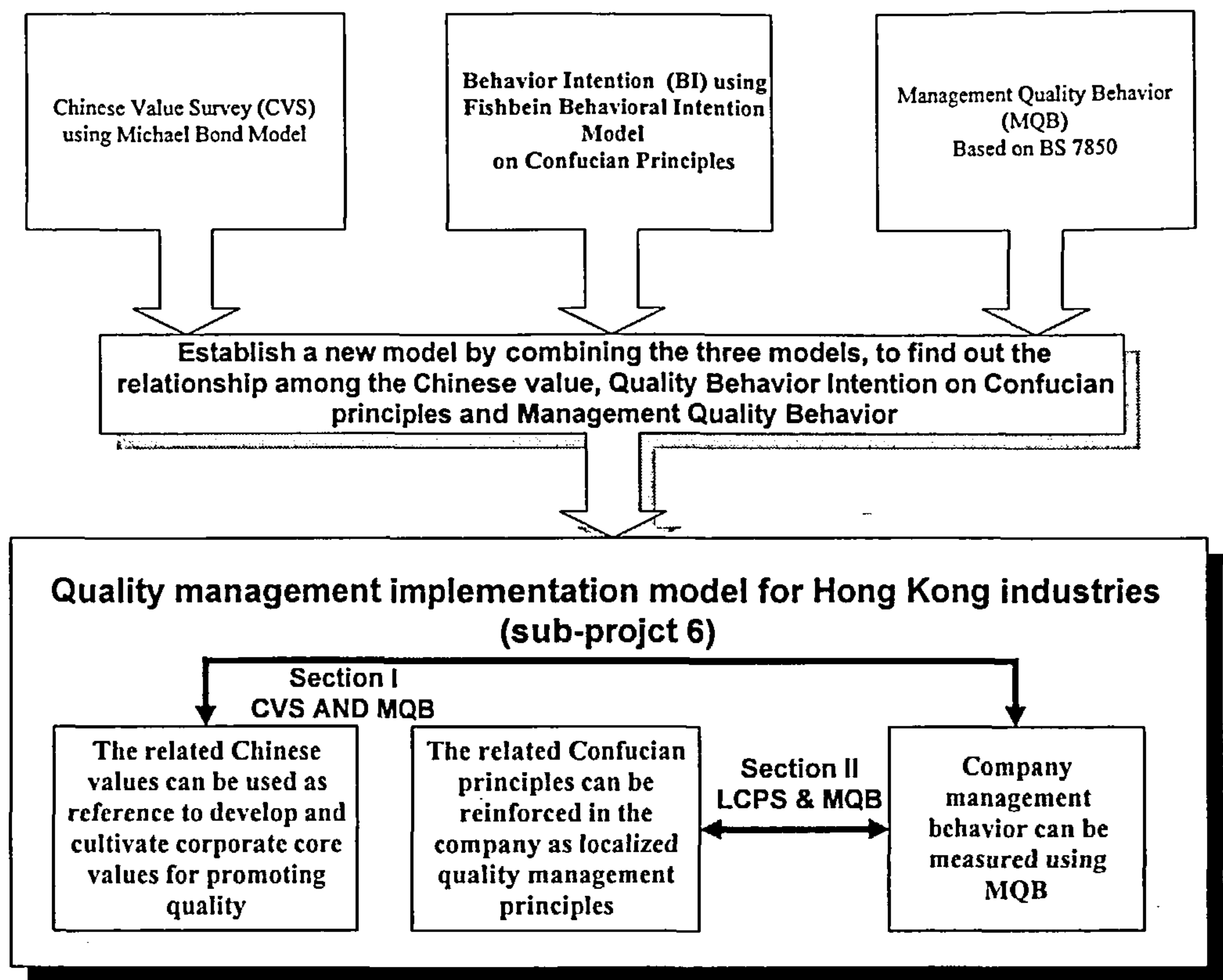


Figure ES 8 : The study model with sub-project 6 forming the bottom part.

The establishment of a causal model on Chinese Values and Quality Behavior

One of the main conclusions from this study is that Chinese cultural values do have an effect on the quality management behaviour of Hong Kong Chinese managers. Confucian work dynamism, one of the factors generated from the Chinese Value Survey, as well as those other related Chinese cultural values were found to be significantly correlated with the management of quality behaviour. This implies that management quality behaviour in Hong Kong must be influenced by Chinese values.

In respect of the personal value towards achieving quality, the study result suggested that personal preferences can be divided into two aspects. One is the role and power that are needed for taking up quality processes. 'Disinterest and pure,' and 'resistance to corruption' are understood to the corresponding key values in achieving personal accountability. Also the attitude of hard working remains an important element in the traditional Chinese way of thinking.

On the other hand, the two facets of personal development, namely the cognition and actualisation, required rather different values for support. For the knowledge learning part, it is suggested that holding a middle ground would be generally recognised to be meaningful among Chinese colleagues. That means

not to go to excess or extremes and hold a moderate opinion in order to keep the harmony. The fulfilment of personal development is based on the values of contendedness and moral discipline. These two values have a common ground that stressed the point of self-cultivation. Perform as others expect, and follow the virtue of being good is the key thinking of Chinese managers when working toward better quality. These findings are summarised in figure ES 9.

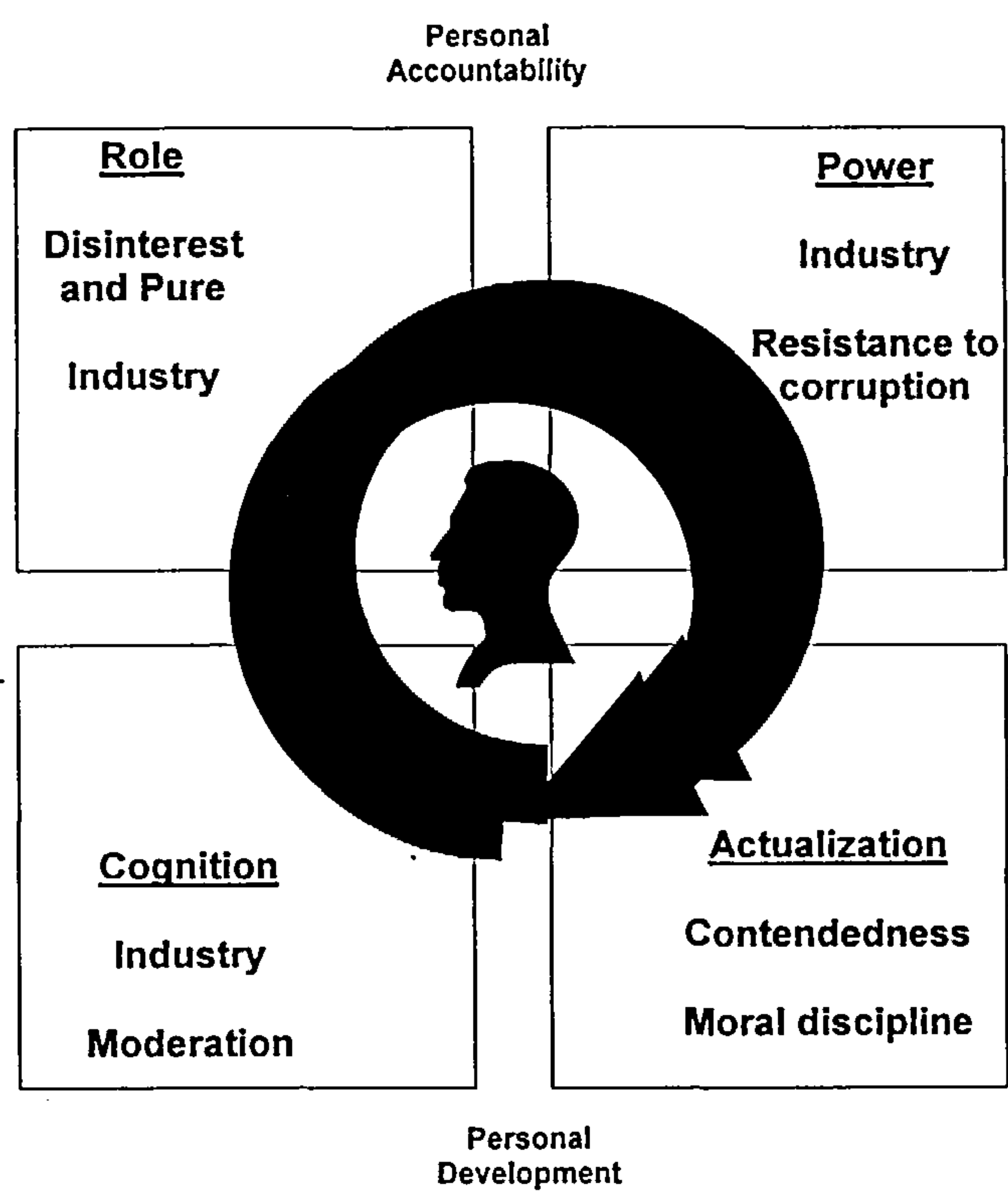


Figure ES 9 : The personal concern in a TQM environment.

Two of the basic principles of TQM are grouped together because of their close relationship in quality management. It is necessary to be able to measure the process of the operations before problems are identified followed by continuous improvements.

The results of the survey suggested an interesting relationship between the Chinese values and the above mentioned principles of quality management. Contentedness and industry are found to be the key values that relate to process measurement. It is logical to Chinese thinking that one should be able to do one's job properly as it is a duty. At the same time other's process should be measured because working hard is a good behaviour. Many of the successful businessmen in Chinese society hold the same characteristics. If problems are to be identified, one must be persistent and prudent to sort out the root causes. It is found that Chinese managers' concern with quality is a common goal of reducing losses. The general concept of reducing quality losses is by increasing effectiveness, efficiency and productivity. In order to achieve the above criteria, solidarity, persistence and few desires are found to be the key values. In other words, Chinese managers signify the reason for having team work is to reduce the number of defectives rather than the concept of customer satisfaction. However working hard and concentrating on the work seem to be still a general expectation from Chinese managers. Figure ES 10 illustrates the relationships between Chinese values and the quality improvement process.

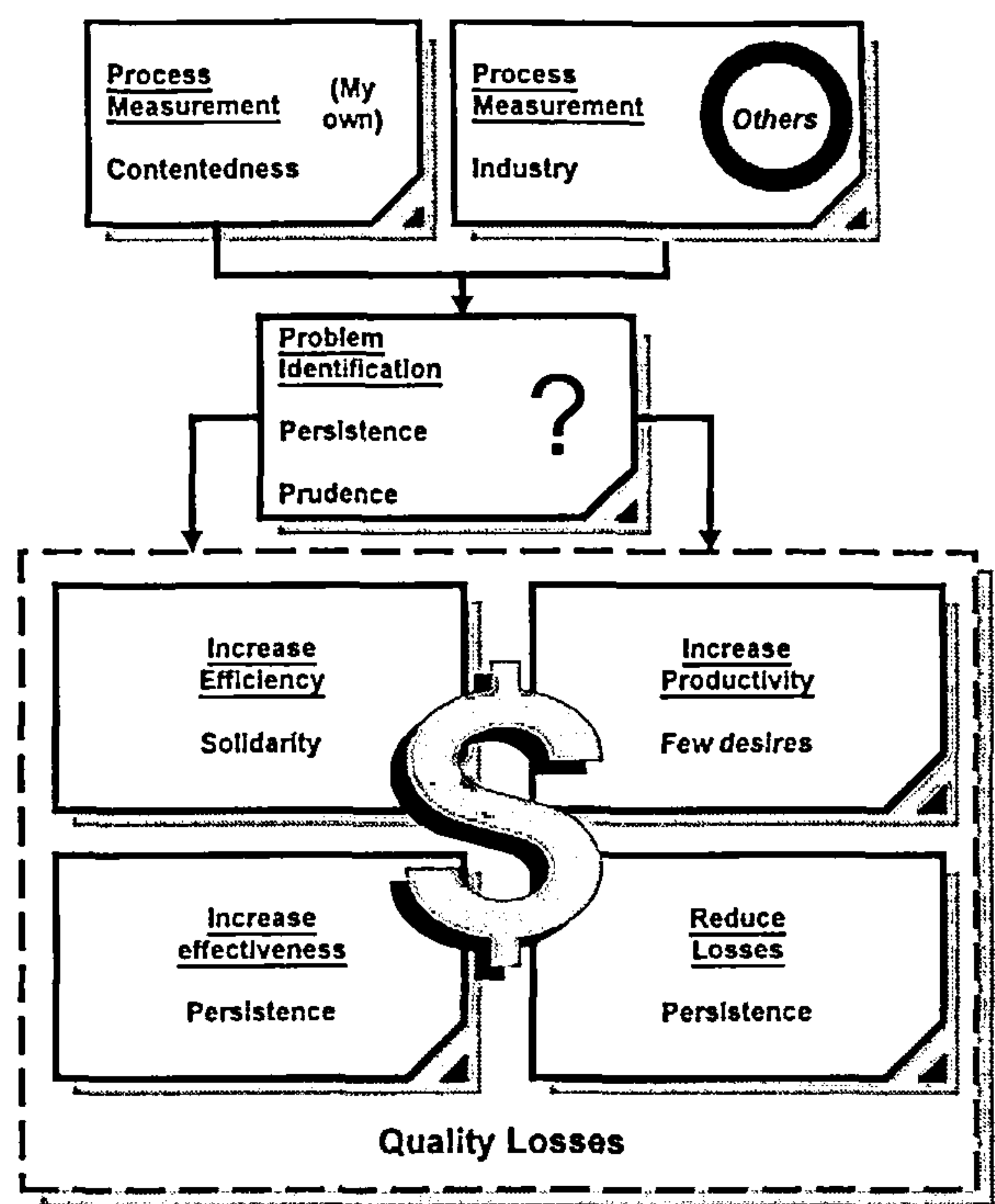


Figure ES 10 : The relationships between Chinese value and quality improvements.

From the analysis, it is found that Chinese values hold direct relations with quality behaviour. However, the essential element of Quality Management-satisfaction of the external customers is observed to be rather an inward looking manner. Chinese managers used the value of ‘self-cultivation’ to service external customers, while the link between internal customers is found to rely on ‘moral disciplines’. These refer to the attitudes towards quality management as group norms. Members in the organisation are compelled to follow because of peer pressure. In the survey analysis, it is found that the main concerns in this respect fall within whether one is able to act in accordance with established standards of good behaviour under the Chinese traditional culture. These morals, rule or

habits of conduct are found to be the major concern when working with colleagues as internal customers.

In the hierarchy of the Chinese company, the key motive to participate was found to be influenced by 'loyalty to superiors'. In the cycle of continuous improvement, the measurement of current process of the owner has mainly to do with 'contentedness'. The support to measure manufacturing process is 'industry.' The next step of problem identification is found to have correlation with 'persistence and prudence.' 'Persistence and solidarity' are the basic values to promote efficiency and effectiveness. A summarized diagram is illustrated in figure ES 11.

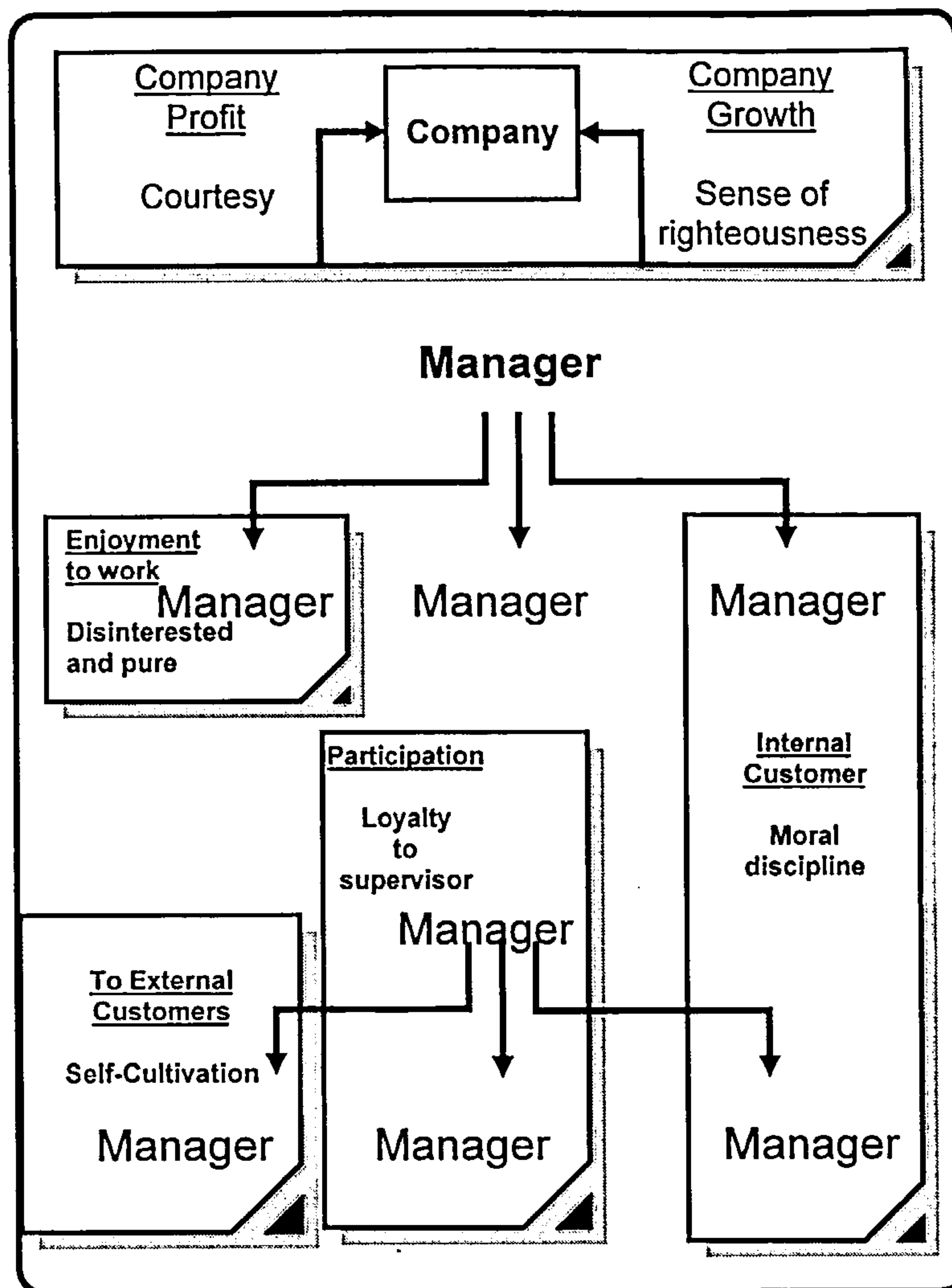


Figure ES 11 : Inter-relationship to oneself, internal and external customers

The effect of Chinese culture on Quality Behavior

The concept of personal benefit will need to be linked to collectivism, i.e., that the benefits to the company will eventually flow onto the individual. However, this may not be enough to achieve total commitment. In a perfect world personal goals would directly coincide with the goals of the organization, so that individual motivation would be at its highest point and targets would be totally accepted and completely fulfilled. Figure ES 12 provides an illustration of the benefits of running TQM. The figure shows company benefits which will lead to personal benefits. Figure ES 13 shows some of the personal benefits resulting from reinforcing self-cultivation. The results of the discussion are used to generate these two Figures (ES 12 and ES 13), in order to identify the Chinese characteristics that come into play while attaining those benefits.

As can be seen from Figure ES 12, the managers should promote collectivism in the company because the employee's loyalty and effort can be beneficial to the company. In addition, the pragmatism of the Chinese culture can ensure that the task is done according to the guidelines, but sometimes breakthrough is also necessary to be emphasized by the managers to the output. Next, the service to the external customer ought to be inculcated in the employees, since customer satisfaction will directly influence the future of the company.

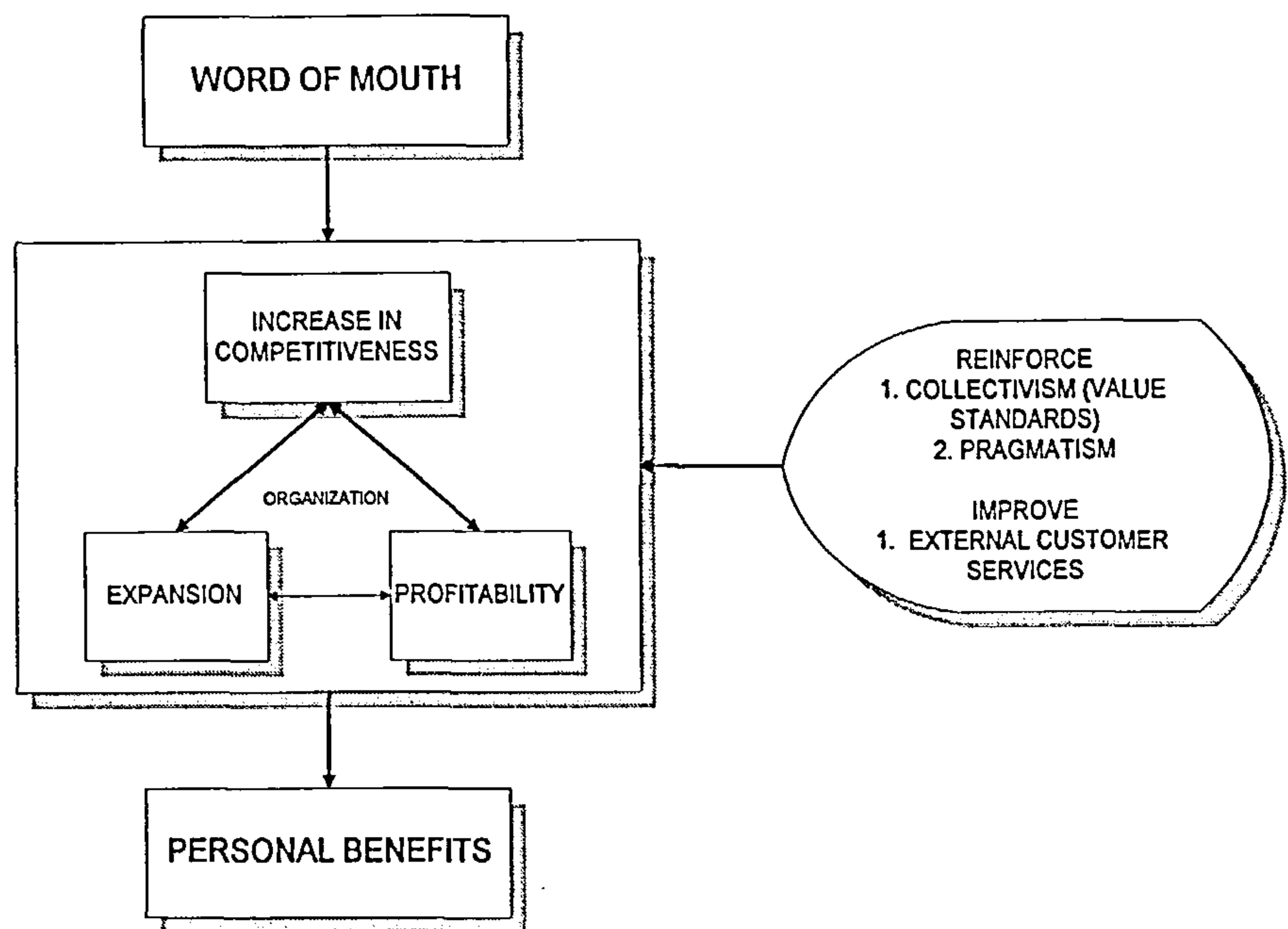


Figure ES 12 : Recommendation to organization for company benefits via personal benefits

Figure ES 12 suggests that it is necessary for the management to let them know that company benefits will also eventually lead to personal benefits. From a Confucian point of view, self-cultivation can be attained by running TQM like improving personal ability. The most important consideration is that the position career ladder be seen in terms of building on the performance of quality related tasks. The above suggestions are aimed at motivating the employees in working for the general benefit of the company.

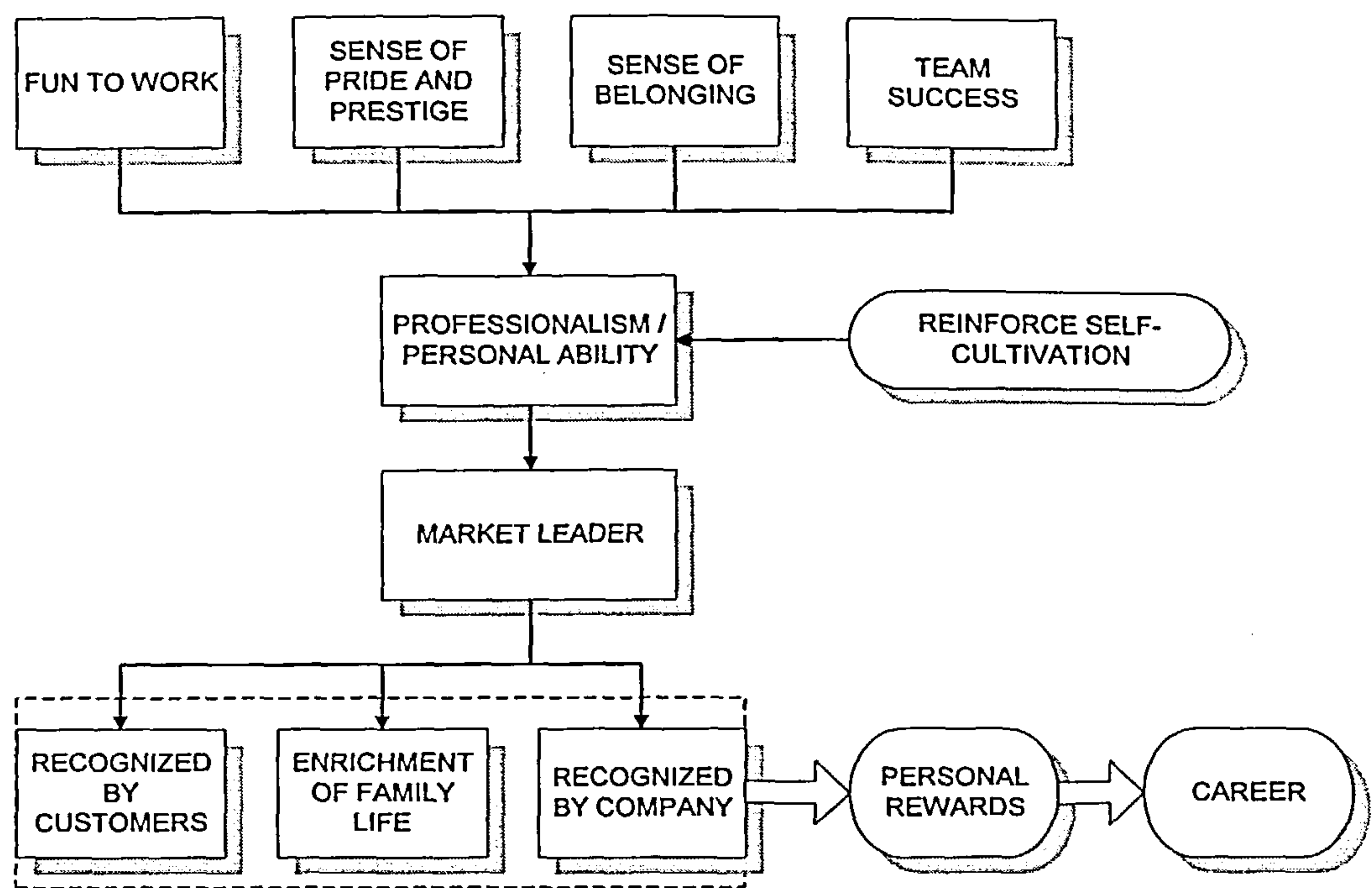


Figure ES 13 : Relationship diagram showing the Personal Benefits in quality management

The results of this research project suggest that it is wise for the management to consider culture while implementing TQM in Chinese organizations. Confucian principles, such as the "Xue Er Zhi Zhi" and "Ge Wu Zhi Zhi" have been identified as two of the major factors in Chinese culture that affect quality management in Hong Kong. The Chinese managers are more likely to accept the importance of learning and training as a means towards better quality performance. Therefore, providing education and training in the cultivation of Chinese values and Confucian principles is a major approach in upgrading the performance of individual staff as well as to the organisation in terms of TQM fulfilment.

CONCLUSIONS TO THE PROJECT

After working through these sub-projects, it is recognised that the Chinese Values Survey (CVS) is a very useful instrument to measure the nature of the target group. However, the Chinese values measured stay as perceptions: very often it is found that these values remain sub-conscious, or they are too deep in their mind that people would find it not practical to recall them and apply them in everyday work. As a conclusion the CVS is a tool that gives an effective approach to uncover the values of local Chinese, nevertheless value is only a fundamental layer in human behaviour. It is commonly found that values have to go through a number of transformations before people express them as behaviour. Values are rather difficult to change.

The project promotes Confucianism to be applied in a new area. Key concepts of Confucianism are put into simple point form called the 19 Confucian Principles. Complex Confucian concepts then become more meaningful and approachable to modern managers in the field of quality management. These principles are studied and interpreted in the context of TQM behaviour by local Chinese managers. The results of the research support the hypothesis that the Confucian philosophy is one of the useful and practical factors in enhancing quality management in Hong Kong. The 'Quality Management Grid' and the 'Three-layer Management Hierarchy Gap Analysis' on

Confucian principles are practical tools that help local industries to understand more about the concept of a Chinese style quality management.

In order to improve local companies' quality performance, the understanding of Chinese values is fundamental. The management should then re-design the corporate culture to suit the particular situation that one might experience in a particular organisation. The idea of building a Chinese based quality culture is to implant Western practical requirements, such as the ten concepts of TQM, onto the basic foundation of Hong Kong Chinese culture. The beauty of having such a suggestion is to facilitate local companies to be able to manage the modern qualifying factors in global competition, and at the same time use the tradition and civilisation that local Chinese would recognise. It is hoped that this project can act as a seed that can arouse the interest of local Chinese in crystallising an indigenous Chinese quality culture for Hong Kong, and in the long run benefit the Chinese nation as a whole.

The author treats the followings as important elements of the Eng.D. project. Activities related to the public domain are grouped into four types. These activities include:

1. Publication of articles in Conferences Proceedings and Journals', see Appendix ES 4 for full list.
2. Publications in local Newspapers, see Appendix ES 5
3. Talks and seminars to industry and educational institutes, see Appendix ES7
4. Interviews and reports by local newspapers, see Appendix ES8

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Appendix ES1

Time lines for Eng.D. sub-projects

Appendix ES2

**List of Eng. D. sub-projects with size
and important levels**

List of Eng.D. Sub-projects with size and important levels*Title: Implementing Quality Management in a Chinese Based Society--Hong Kong (By Victor Lo)*

Sub-project A 2.1(*)	The Development of quality management in Hong Kong.	1882
Sub-project A 2.2(*)	Strategic Quality Management in Hong Kong industries -- Trends and Principles	2361
Sub-project A 2.3(***)	Using Industrial Engineering (I.E.) in promoting TQM	2090
Sub-project A 2.4(**)	Regional review of Quality Management	2708
Sub-project A 2.5(**)	The Quality Management Model in Hong Kong	5126
Sub-project A 2.6(***)	Quality Management and Quality Culture Development in -- A Case Study in Hong Kong	3692
Sub-project B 3(*)	Introduction to Chinese Value Survey (CVS)	781
Sub-project B4.1(*****)	The Adoption of Confucian Principles in Quality Management-- A case study approach	5906
Sub-project	Application of Lo's Confucian Principle	7519

B 4.2(*****)	Survey (LCPS) in Hong Kong	
Sub-project B 5(****)	The Missing Quality Dimension in a Chinese Based society-- Hong Kong	3945
Sub-project B 6 (*****)	A Chinese Cultural Consideration on Quality Management Implementation in Hong Kong	11481
Personal Profile	Competencies developed & Competencies demonstrated	~3800
Executive Summary	<ul style="list-style-type: none">• Sets portfolio in the context of the engineering business environment• Describes orders of reading• Innovation• In public domain	~7000

Key:

(*) = Background work of the research

(**) = with contributions to the findings

(***) = Important contribution in direction

(****) = Significant contribution to further the study

(*****) = Core projects

Appendix ES3

Detailed explanations of the

Confucian Principles

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Updated on 25 November 1995

The establishment of the 19 Confucian Principles for Quality Management study

Confucianism had been regarded as the basic social virtue that is the keystone of the Chinese culture. The working principles of Confucius are expected to be found in most of Hong Kong Chinese. Although Confucian principles are not widely taught in school in Hong Kong, however most of the local Chinese learns them from their parents through family activities. In this study, there is a need to list down Confucian Principles in point form, so that respondents can select their preferences precisely.

The establishing a set of basic principles of Confucianism is a lengthy process. It starts with literature search. Old Chinese books on Confucianism are used as key references, because these books are very old and are usually difficult to read, experts in Chinese Philosophy from the Chinese Department--University of Hong Kong, are invited to join the working team. Exact meanings are interpreted in modern Chinese and then translated into English. Totally nineteen principles are identified, extracted and put forward to be used in the questionnaire. In order to make the principle easy to identify, each of the principles are summerized into a four characters' idiom in Chinese.

The nineteen key Confucian principles

This is a list of selected pragmatic principles extracted from traditional Confucian philosophy. This list is not supposed to be exhaustive, and does not subsume all Chinese philosophies. The selection is recommended by the research engineer with an attempt to reinforce the human aspect of quality, such as the values of duty, self-discipline, and loyalty. The list is used in a study to investigate which Chinese Confucian philosophy principles have the most significant influence on the implementation of modern quality management in Hong Kong.

1. Pursuing knowledge through continuous learning (*Xue Er Zhi Zhi* 學而知之) --
Confucianism was a way of learning, while knowledge is recognized to be the nutrition for the growth of moral life. *Xue* is regarded as a major theme of Chinese philosophy. The ultimate goal of human beings is to become a perfect person. The perfectibility of human beings and the need for constant renovation of the spirit in order to achieve perfection forms the major theme of Confucianism. Chu Hsi (朱熹), a great follower of Confucius, thought that perfection of the world can be achieved if everybody applies 'learning for the sake of one self'-- a phrase which recalls Confucius's concise formulation of the fundamental conduct principle in the Analect. He recognized that learning should be for the sake of oneself and not for the pleasing of others.
2. Individual perfectibility as a pre-requisition to management (*Xiu Shen Zhi Guo* 修身治國)
-- *Xiu* means putting things in order. *Xiu Shen* means to cultivate one's own morality, to train oneself to understand the higher order of truth of nature, and through inner inspiration, to understand the needs for the sensitization of individual conscience morally

and socially. Every person should have a sense of responsibility for one's actions and its consequence of such actions.

3. Building leadership through practicing virtue (*Yi De Fu Ren* 以德服人) -- *De* means virtue, goodness, kindness, morality, favor or ethics. In order to have followers and supporters, it is important for the leader to act according to the principles governing the conduct of the group, based on a commonly accepted ethical values.
4. Managing by observing rites (*Yi Li Zhi Guo* 以禮治國) -- This principle originally means 'to practice,' and in common usage, interpreted as 'ceremonies, rituals, or rules of proper conduct in social institutions and human relationships'. *Li* refers to the rules of the rationalization and reasoning that a person feels comfortable to follow. It is believed that these rules come from the intersection of human consciousness and the way of the heaven. These rules form an ethical system (禮制 *Li Zhi*) that can actuate good quality. People belong to various classes or functions in the system and perform their respective duties according to the *Li Zhi* rules. The driving force to follow the system comes from the faith to the ethical principles of *Li*. The theory of carrot and stick does not apply.
5. Understanding the significance of unified strength (*Ming Fen Shi Qun* 明分使群) -- *Qun* means a group, a crowd, a company, a multitude, a society or a community. For any group of people or organization to be able to produce high quality output, the maximum power that a group can yield results from aligning all the energy available. Chun's concerns conceptual elements, such as common values, mental power in the form of knowledge and skills, also the physical strength. Without honoring Chun, the total energy

output level will drop due to the opposing forces and conflicts which cancel each other out.

6. Placing high value on harmony (*Yi He Wei Gui* 以和爲貴) -- *He* means harmony, union, agreement, or conciliation after a strife and peace. The value of harmony, in turn, emphasizes on loyalty, group and family identification, as well as the acts of righteous individual.
7. Respecting the heaven (*Zun Zhong Tian Dao* 尊重天道) -- *Tian* means the sky, the heaven, nature, God, where God or the gods live, nature, day, climate, weather. It is believed that heaven acts on the human conscience to maintain a dynamic tension between the ideal order and man's actual condition. So it is important to be able to discover the truth concerning heaven's principle (天理 *Tian Li*). Hsun-tze (荀子) uses it in the sense of impersonal nature, and he attacks the concept contained in the classics which was current in his time that heaven is an anthropomorphic (related to human character) god. The minds of person were all the 'heavenly principles' needed to guide his conduct of life. It is every individual's duty to exercise his own conscience and his relative autonomy in the creative interpretation of the *Tian Li*.
8. Adopting moderation in decision making (*Zhong Yong Zhi Dao* 中庸之道) -- *Zhong Yong* means never go to the extremes. It is characterized by moderation, restraint and compromise, but it is different from (鄉愿 *Xiang Yuan*) or a hypocrite who takes something in between without deep reasoning or based on moral consideration. *Zhong*

Yong is also the name of one of the three doctrines of Confucianism, called 'The Golden Mean' or 'Book of the Middle Course.'

9. Profit follows righteousness (*Yi Yi Sheng Li* 以義生利) -- the original meaning of *Yi* is appropriateness, righteousness, justice or duty. Hsun-tze often uses it to denote the Confucian moral concept of righteousness with oneself as a motive of acting morally. *Yi* or the acts of righteous individuals is to be exercised within the framework of loyalty to the pertaining organization. Hsun-tze often attributes the establishment of rites and righteousness as a great merit of the ancient sages.
10. Introspecting according to moral spirit (*Fan Qiu Zhu Shen* 反求諸身) -- *Fan Sheng* (反省) means introspection, reflection, perception with consciousness of self, and collection of one's thought. In dealing with wrong doings, everyone should first look at one's own performance or work to see if it has contributed to the cause of such failure. The idea is to stop blaming others but to introspect oneself. If everybody is introspecting according to the highest moral standard, no confrontation nor conflict will occur. Everybody can then concentrate on doing a better job by maintaining a better team.
11. Educating with the moral 'Tao' (*Jiao Zhi Yi Dao* 教之以道) -- *Dao* is an important technical term in Chinese philosophy, originally it means the way, the road, a method, or a principle. Tao is classified into three respects: the way of heaven (天道 *Tian-Dao*), the way of earth (地道 *Di-Dao*) and the way of person (人道 *Ren-Dao*). The first two form the principle of the universe and nature. This principle is not so much a metaphysical principle but is attainable by observation and experience. The latter has become the core

of Chinese philosophy which affirms that morality is the unique and universal way on which all men should walk in order to perfect themselves both individually and as a group. Individual cultivation is used as the fulcrum of the moral mind to gain leverage on ethical behavior. The basic idea is if everybody in the organization is fully aware of, and behave according to Tao, their common goal will be achieved, Each member will become reliable and accountable for his defined duty.

12. Using moral perfection as a policy to achieve peacefulness (*Ren Zheng An Ren* 仁政安人)

-- *Ren* means humanity, mercy, and kindness. It has become a technical term of Confucian ethics after Confucius took it as his moral ideal. In Confucian theory, *Ren* means perfect virtue, or the ultimate state of man's moral life. Confucius recognized that to achieve *Ren*, people should restrain themselves according to the rules of conduct in social and human relationship. Confucianists claim that moral practice is the key to reach the state of *Ren*, yet concrete details of different moral practices are advertised by different thinkers. *Ren* often denotes a stronger moral sense which can only be completely manifested in the appearance and behavior after moral cultivation. *An* means rest, tranquillity, comfort, ease or content. Staff members work under this moral environment feel safe because they know every decision made would not violate righteousness and human nature. The staff can put their mind at ease and can perform their work wholeheartedly.

13. Applying cosmopolitan relation (*Tian Xia Da Tong* 天下大同) -- *Da Tong* means cosmopolitanism. Here it means to recognize the importance of everyone in the system and to treat everybody equally fair in order to maintain harmony within the team.

14. Placing high value on people (*Yi Min Wei Gui* 以民爲貴) -- Treat human being as part of the universe, together with the heaven, the earth and everything else in between, treating all these as one family. It is the responsibility of every individual to maintain the family system. The way to do, is to understand the inter-relationships of the heaven, the earth and human beings (*Ming Ming De* 明明德). Attaching high value to people making them an equal to the heaven and earth, is regarded as the maintenance process of the family system. Loving people is the working principle.

15. Following the five basic relationships of people for social stability (*Jiao Zhi Yi Lun* 教之以倫) -- *Wu Lun* (五倫) is the five ethical focuses of human interactions. The balance of the organization is a basic requirement for producing quality outputs. Nevertheless in any organization here is always a hierarchy, which is composed of different ranks of people taking up different functions of the operations. Among these people mutual and complementary obligations are needed to mold the basic cooperation. The junior partner owes the senior respect and obedience; the senior owes the junior protection and consideration. The five relationships are:

- ruler and subject,
- father and son,
- older brother and younger brother,
- husband and wife,
- older friend and younger friend.

16. Using family as a prototype of an organization (*Zhang You You Hsu* 長幼有序) -- A person is primarily not an individual but rather member of a family. Children should learn to restrain themselves to overcome their individuality. This is believed to be the secret of maintaining harmony in the Chinese family, which is traditionally very big. However each member is given more dignity, respect and honor as they grow older and have become more mature. Everybody in the family is given an equal opportunity to enjoy seniority. At the same time every member of the family is required to learn the required knowledge and moral practice.
17. Laws and regulation are not sufficient to manage an organization (*Tu Fa Bu Zu* 徒法不足) -- *Fa* means governing by straight laws and punishment; people will certainly be more careful in order to reduce making mistakes. Confucius said 'Leading people with ruling measures and regulations can only reduce the number of wrong doings, but not the sense of honor or loyalty, as people will never follow the system wholeheartedly. Leading them by virtue is a long term solution, letting the sense of shame and moral be the driving force is the only way to last long.'
18. Investigating things and extending knowledge (*Ge Wu Zhi Zhi* 格物致知) -- *Ge* means to reach or arrive, and is a process by which principles in the mind are brought into contact with principles in things. *Zhi* is to recognize, be conscious of, or to project one's knowledge, hoping to maximize one's capacity to know. The same passage can be read as 'The extension of knowing lies in investigation of things'. If one's wishes to extend one knowledge, it is necessary to understand the principle of any affairs one comes into contact with. If a principle remains undiscovered, one's

together seven sources of 450 U.K., U.S. and European management journals, 22,000 management books and management working papers.

The key words used in searching includes the combinations of the following terms of the two groups:

Group A: Quality, Quality Management, Total Quality Management, Quality Assurance, ISO 9000, Quality Assurance Management System, Management system.

Group B: China /Chinese Philosophy, China / Chinese culture, Confucianism / Confucius, Taoism / Tao, Tai-Chi, Yin-Yang.

All four databases failed to reveal any dissertation title, article, or papers from any combination of the two search words groups which repeated any substantial part of the research, reinforcing the author's view that the results of this research are novel and interesting. It seems safe to conclude that the results form a new concept in the application of Chinese culture and philosophies in the process of implementing TQM tools and concepts in a Chinese-based organization.

2. Dissertation Abstracts International (DAI)

Dissertation Abstracts is a comprehensive source of dissertation information dating from 1986 to Sept., 1994. The database covers more than 1,200,000 doctoral dissertations and masters' theses; more than 50,000 titles are added each year. Dissertation Abstracts presents work from over 1,000 universities throughout the world, including most North American graduate schools and many European universities. The coverage of the database includes the key fields of "The humanities and social sciences" and "The sciences and engineering."

3. Business Periodicals

The database is published by the University Microfilms international, with global coverage in business and industry. It has over 800 indexed publications and journals, including the Forbes, Fortune, Business Week, etc..

4. Institute of Management International Databases Plus

The database information is provided by the Institute of Management, with comprehensive collection of resources on management in Europe, drawing

knowing is not fully exercised. One should commit to be a learner, as one comes upon the things of this world, must proceed from principles already known and further explore them until one reaches the limit. After exerting oneself for a long time, one will experience a breakthrough in integral comprehension. Then the quality of all things will be apprehended; and the mind, in its whole substance and great functioning, will be fully enlightened.

19. Managing works with brains (*Lao Xin Zhe Zhi Ren* 勞心者治人) -- This is a principle put forward by Mencius (孟子) concerning the relationship between management and workers. Management and workers make up the structure of any operation. Those who contribute the brain strength are classified as management and those who use their physical strength are to be managed. Both groups enjoy mutual respect, after all they are human beings. The advancement of the society highly depends on the harmony between the two groups. Although the nature of duty is different, it should be regarded as “division of labor” only, and thus should be viewed as a natural arrangement. The cooperation and harmony between the two classes are the basis forming a success team.

Appendix ES4

Paper publications in Conferences and Journals

Paper Publications in Conferences and Journals

1. Lo, V.H.Y. (1997) 'The Adoption of Confucian Principles in Quality Management' CIRP International Symposium, Aug.,1997.
2. Lo, V. H. Y. and Cheng, T. K. (1997) 'Quality Management and Quality Culture Development in Hong Kong', The 2nd International Conference on Quality and Reliability ICQR'97, Sept, 1997.
3. Lo, V.H.Y. and Cheng, T.K. (1997) 'A Missing Quality Dimension in a Chinese Based Society', Training for Quality, Issue 5.3, 1997.
4. Lo, V.H.Y. (1997) 'A Chinese Perspective on TQM - the recapitulation of Confucian Principles', Pending for acceptance, International Journal of Management.
5. Lo, V.H.Y. (1997) 'The Revealing of an Oriental Approach Towards Better Quality - the Intrinsic Confucianism of Chinese', Pending for acceptance, British Journal of Management.
6. Lo, V.H.Y. (1995) 'Using Quality Management as a Manufacturing Strategy in Hong Kong', Quality Towards the 21st Century, Proceedings of the International Symposium on Total Quality Management, City University of Hong Kong, pp 149-157.
7. Lo, V.H.Y. (1995) 'Industrial engineering and TQM', Training for Quality, Vol.3 No.3, pp 4-7.
8. Lo, V.H.Y. (1995) 'Using Quality as Companies Management Strategy', International Conference on Quality and Reliability, Organized by the Quality and Reliability Center, Nanjing University, Warwick University, the Hong Kong Polytechnic University and the Hong Kong Government Industry Dept., Proceedings of the First International Conference on Quality and Reliability, Vol. 2, pp 287-292.
9. Lo, V.H.Y. (1995) 'Using Quality Management as manufacturing strategy in Hong Kong', International Symposium on Total Quality Management (By invitation) Organized by the City University of Hong Kong, 22-24 March, ISTQM'95 pp 149-157.
10. Lo, V.H.Y. and Sculli, D. (1995) 'Regional Review of TQM in Hong Kong and Southern China', Training for Quality, Vol.3, No.2, pp. 5-8.
11. Lo, V.H.Y. (1994) 'Strategic quality management for small-sized firms in Hong Kong', International Foundation for production Research, Asia-Pacific Conference Proceedings, Japan, Nov., pp 6.14-6.25.

Appendix ES5

Chinese News paper publications

探討品管哲學

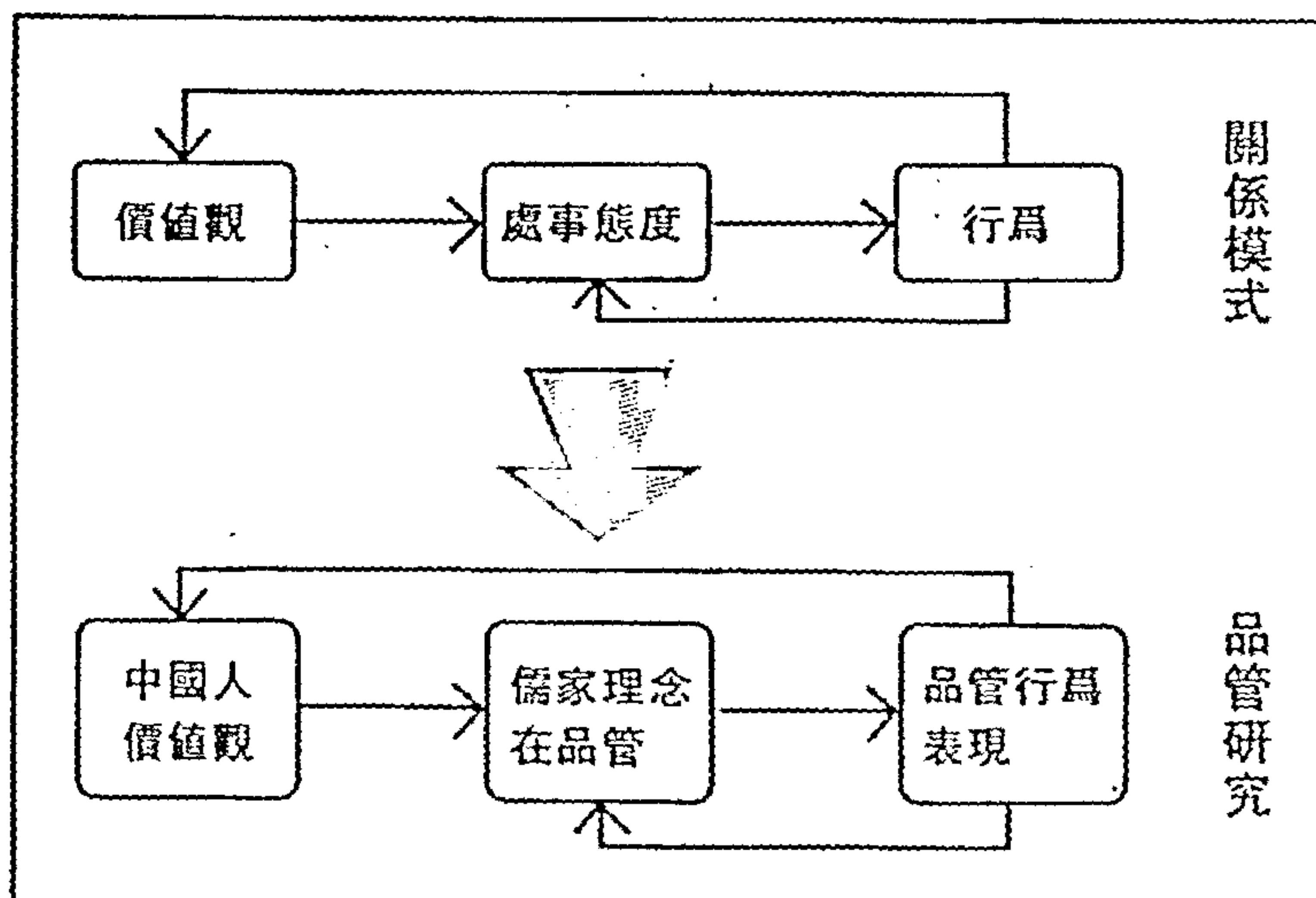
踏入九十年代，品質管理開始普遍被香港工商企業所重視，因為在今天世界貿易競賽場上，唯有優質產品是保證市場佔有率的最好辦法；爲了加強在這方面的競爭力，香港政府工業處自一九九〇年開始展開了一連串의品管推廣項目，其中包括邀請外國專家及經驗人士講解品管理論及發展歷程，因而助長了本港各行業採用西方國家盛行的品管方法。

在過去的幾年間，不少機構爲了方便推動品管，紛紛進行不同模式的活動，以促進員工的品管意識及處事手法，務求通過高質素的運作，達成優質產品的目標。

分析西方品管的結構，可以歸納成爲「品管哲學」，「品管系統」及「品管工具」三種範疇；雖然本港的品管培訓發展十分出色，並已全面地包括了以上三方面的品管類別，不過最近筆者曾做過一個研究工作，發現本港機構在品管系統及工具方面的成果值得鼓舞，但在品管哲學方面卻未能深入民間，故此筆者希望在這方面能作出進一步的探討，目標是通過這些活動，能引起有關人士的興趣及關注。

香港品管哲學的發展多以外國的書籍及理論爲藍本，於中國人而言，對這些品管哲學的接受程度，必定會受文化差異的影響而減弱，反思全面品管的主流概念都以人爲本，所以如果能從中國文化開始，以中國傳統哲學概念與今天流行的品管哲學結合，相信會使中國人更能容易接受。

著名學者英格蘭（G.W. England）及康拿（P.E. Connor）先後在一九六七及一九九三年發表了他們的文章——「人類之間的關係模式」，當中鼓吹了行爲是與價值觀及處事態度有密切的互相影響關係；從上述文章中，啓發到筆者嘗試結合中國人價值觀，儒家學說及品質表現的一個研究項目。（續下期）



香港大學工業及製造系統工程系講師盧興猷



品質問卷調查

在問卷設計方面，筆者採納員工對問卷多方面的意見，經過試驗性的調查，將不合用及可能有誤導的部分刪改，務求使問卷的偏差和誤解減至最低，調查結果最後亦透過面晤員工的方法，作進一步的理解及引證，以增強調查結果的可靠性。

在調查工作方面，問卷的分發及數量的公司職級架構為藍本，調查對象分操作員（生產員）及非操作員兩大類，而非操作員則再微分為管理、工藝（工程）及一般員工三種。問卷抽樣計畫以百分之二十為目標，例如全公司有一百位管理員的話，就會隨意抽出二十位作調查；整個計畫共發出一百八十份問卷，總回收率為百分之四十四，其中以管理組別之回收率最高，達百分之八十，而操作員組別亦有百分之四十三回收，最後合計共有八十份有效問卷收回。於同類型之研究比較，成績非常理想。

由於被調查的公司在質量管理上非常重視，故此整體來說，員工在全面質量管理方面均有很豐富的基本知識，尤其是管理層對品管的認識更為突出，但大約有百分之四十四的問卷卻認為品管只是個口號，這反映出員工對品管概念的意識仍未夠深入了。

整份問卷由五個主題組成，並分布在不同的調查題目，最後這些問題就再次整理歸類編排，重組成為主題群，並計算出該公司在這方面的成熟程度。

首先談一談第一個主題群，就是對品管概念及工具的認識水平，在這方面，整體來說大部分員工都認為自己明白品管知識，有百分之二十四的操作員（生產員）估計自己為十分了解，而非操作員卻只有百分之十二有以上的感覺，其中以管理者的反應最好。回顧該公司的政策，在培訓生產操作員對品質的認識都不遺餘力，而非操作員就只有當管理的有較多機會參與，至於其他負責工藝（工程）及一般支援工作的員工卻未有足夠的機會去接受培訓，工程人員在這主題群的反應顯示出他們所接受品管知識的機會比操作員工少，這現象頗為費解，因為工程部是該公司維持生產的主要骨幹。考其原因，是高層策劃者以為工程人員是獨立工作的專業人事，對生產來說只是起了支援作用，並非直接投入生產工作，故忽略了工程員與生產綫的合作性，因此在品管培訓方面並無刻意安排；其實以上所提及的誤解，正反映出工業界對全面品管的一般誤解，就是認為與產品有直接關係的員工才需要接受品管教育這個錯誤觀念。（續下期）

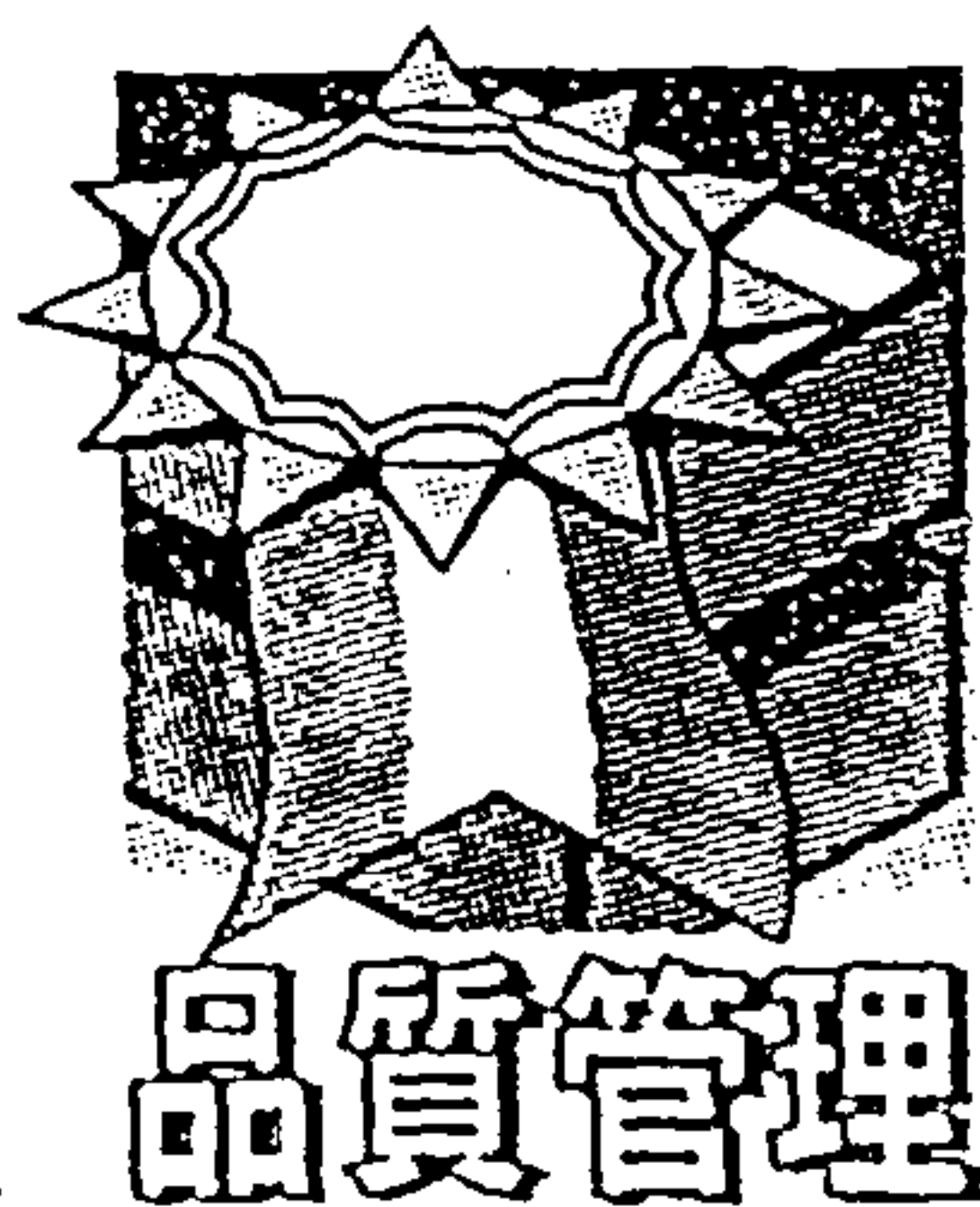
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調查對象：非操作員（一般員工、工藝工程人員、管理人員）及操作員（生產人員）。



品質問卷調查(二)

著名學者譚馬士 (B.Thomas) 在他的著作「人與品質之重要性」 (The Human Dimension of Quality) 一書中，結論到推行品管的首號失敗因素是員工對企業所推行的一切漠視不理；故此期談到的第二個主題群是「員工對公司推行全面品質管理能否產生共鳴」。在這次問卷調查中，全部非操作員都對該組問題有極佳的回應，並覺得品管運動與他們的工作有着直接的關係，相對而言，操作員的平均評分卻只屬中及中下等，反映出操作員對品管有關的活動的投入性較低，從數據中亦顯示非操作員比操作員對品管的感應度較高。



回看上期主題群一的討論，該公司其實已經花了不少資源去培訓操作員在品管方面的認知，反映出培訓工作可能過於偏重技術而較弱於哲理層面，不過整體員工的平均分還算不錯，意味着員工對企業推行品管並無反感。此外數字亦顯示了教育水平與接受品管有正相關 (Positive Correlated) 的現象，表明品管與個人的教育培養有一定的關係。

第三個主題群是「參與品管後是否能增加工作熱情」，結果中約有半數員工認為公司推行品管後對他們的工作有正面的幫助，主要原因是來自員工的參與感，其次是由於品管活動使有關的工作更為清晰，而省卻了不少無謂的程序，並直接提高其工作效率。在這批員工中以中及初級管理者的反應最好，表示出他們對品管的熱心。在過去的數年裏，公司積極地努力推行品管及塑造一個合適環境，盡量使管理人員做到知行合一這個理想，分析該公司今天在品管方面驕人成績，這兩階層的管理人員的落實執行實在是功不可沒，加上高層領導的明確方向及不斷支持，就營造出這一番成就了。

然而其另外一半的員工，卻未感受到推行品管的好處，這是值得關注及作進一步研究及了解的，當中以工藝人員及一般支援工作員工在這問題群的反應較不理想，主要是他們的工作環境並未能充分使他們投入及發揮個人品管興趣，此外生產操作員亦對推行品管而帶來的興趣不太察覺，也不甚投入，由於在這方面牽涉人數很多，因此筆者對這現象甚表關注，故特別通過會晤員工，作進一步了解箇中原因。(續下期)

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品管問卷調查(三)

上文提及發現公司內的操作員對推行品管之興趣微弱，研究員特別安排了一連串的員工友善會晤，希望在平和及中肯的環境下，對操作員作進一步了解。總結會晤結果有下列四點發現：

(一) 員工一般認為公司的品管制度已上了軌道，但操作員覺得這制度只是公司運作的一部分，對他們而言，這亦只是他們的指定工作之一，故此對品管成就沒有特別的感受。

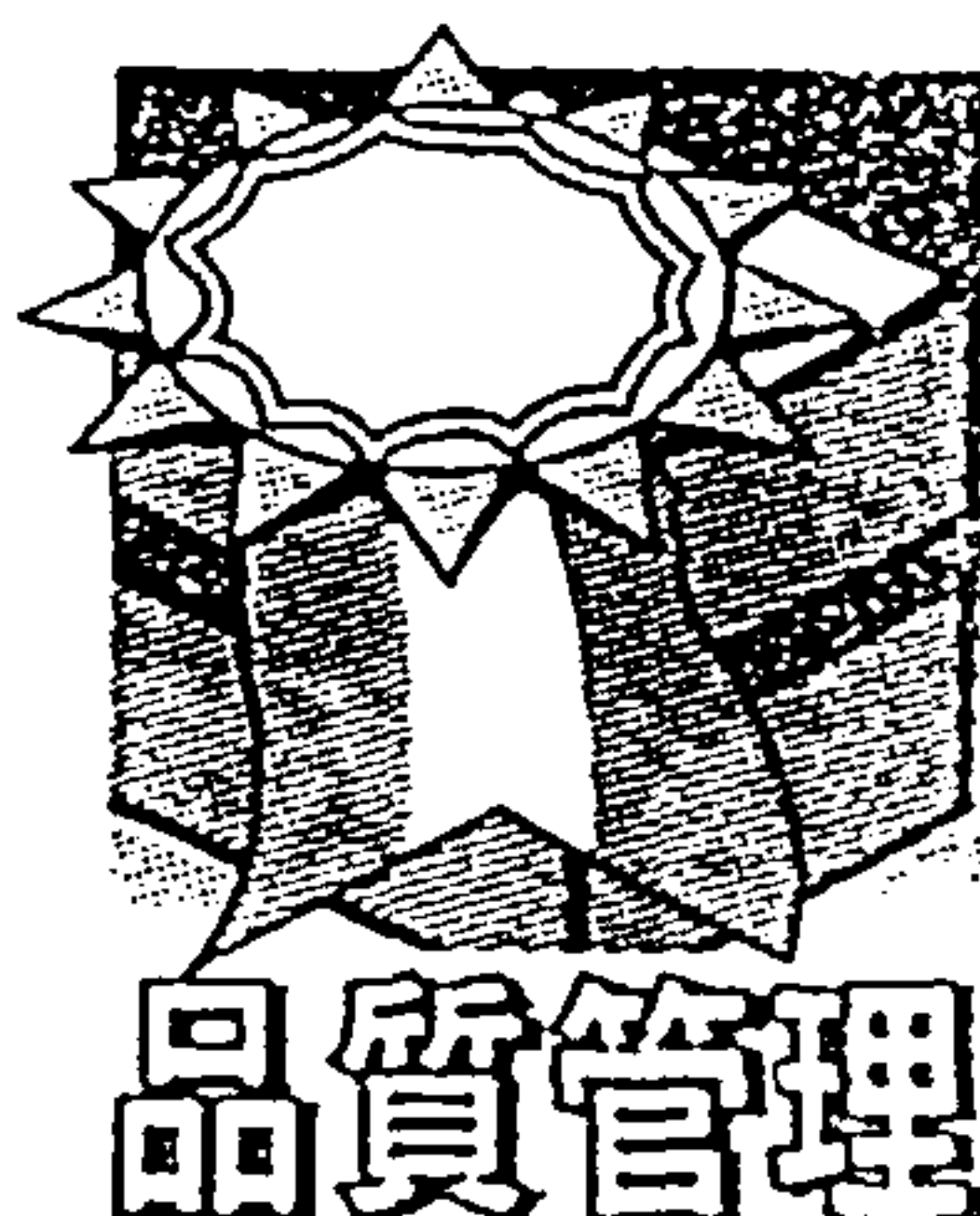
(二) 操作員的工作極大部分是重複性的生產工序，他們絕少有機會涉及有關品質方面的決策，每當遇到品質問題時，他們只須回報主管有關技術及工程人員便會馬上接管問題，直至問題得以解決後，才交回生產操作員，在這過程中，操作員能參與改善問題的機遇不多，因此他們都養成了被動的習慣，認為只要遵從主管的意思便行了。

(三) 部分員工覺得自己教育水平不高，而品管是高層人員才能理解的學問，故往往未有刻意投入學習品管哲理。

(四) 操作員的工作評估都以工作速率或生產率為準，有些件工計算的工人，更集中精神在減低不合格品數量或提高生產量等指標，卻遺忘了更重要的品管哲學與個人成長之關係。

第四個主題群是上司對全面品管的支持——目標公司在這方面的表現不錯，大部分的問卷反應都是好評，約有三分之一的員工更認為主管是全力支持推行品管，其中以初級及中級管理人員是持最佳反應的一群，在調查中發現員工用來量度上司支持品管的指標有二，第一是與上司接受建議的程度成正比，意思是說上司越多採納品管建議，就會被下屬越覺得他們支持品管制度，第二是能授權下屬推行及全權負責品管事宜，亦是常用的量度指標；相對地，公司在品管上所批撥金錢的數量卻未被視為最重要的考慮點。

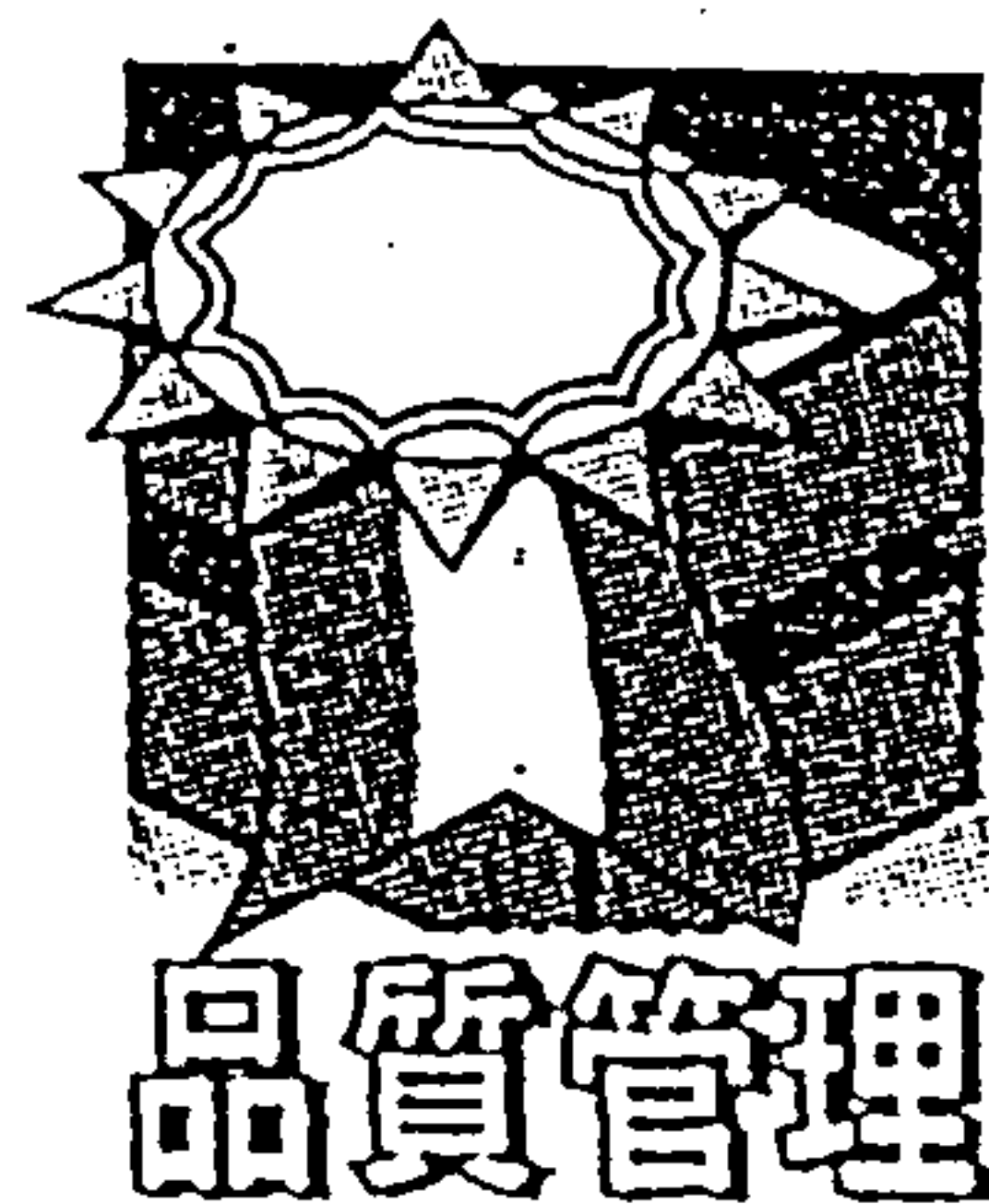
主題群五是上司對品管技術及概念之應用——研究員相信員工對上司在這方面的表現對他們是否積極參與品管有極大的關係，大約有四分之一的員工極同意他們的上司有應用品管，而平均來說該公司在這主題群的得分亦不錯，不過特別值得一提的是中層管理對上司在這方面的評分最低，反映到高層管理除了帶領品管方向及制訂改善環境政策等之外，而他們的行為亦非常重要，因為品管文化是絕對依賴高層人員的以身作則，不過，據研究員所了解，該公司的高層對品管確是非常投入，亦有不少應用品管原則的個案，可惜其透明度不高，這應是領導層值得參考的一面。



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品管問卷調查（四）

總括五個主題群的結果，各組別的反應都有着一些共通點，就是大部分的操作員及一般支援員工都能對品質保證的技術和品管系統有着一定的認識，但對於品管哲學層面的思維卻未見有突破性的了解。所以對公司推行優質管理的感應很弱，只覺得品管是被指派的工作之一，故還能停留在被動的狀態，而未能將工作與品管精神結合，而推廣成為應有的做人處事哲理。



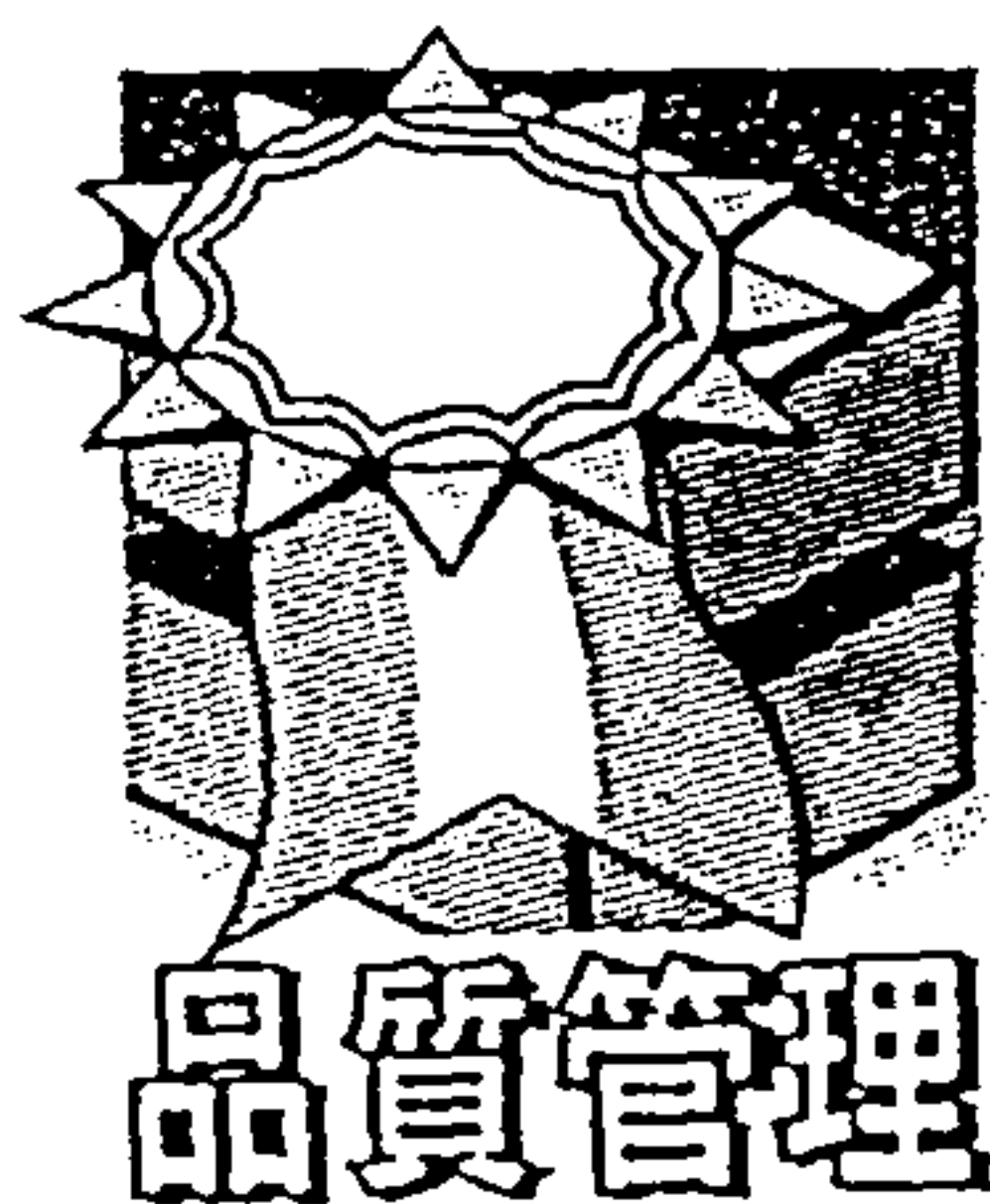
此外，大部分的工程人員，特別是教育水平較高的一群，對品管都有一定的興趣，可惜由於工作的安排，工程人員大部分都只能爭取自學的機會，又往往缺乏了發揮品管才華的空間，然而這一羣員工對在機構內推行全面品質管理而言，是一股強大的潛在資源。朱蘭博士在他鼓吹的「大品質」（Big Quality）概念中，指出全公司不論是屬何部門，員工對公司各方面的運作，都應有着一樣的責任，各人都要發揮無工作界限的不斷改良精神；反觀被調查的機構，工程人員在公司裏擔當的角色只被看成支援性質，因此並未視為與機構全面滿足顧客有直接的關係，這點與朱蘭博士的品管理論並不符合。

從這次研究中，發現該公司成功的原因之一是對初及中層員工在品管方面的培訓非常關注，並特別出色，所以在機構推行品質管理時，他們是最有力的一羣，尤其中層管理人員本身的管理工作與品管目標亦很接近，所以在推行品管時，往往能從實際工作裏體驗到品管技術，品管系統，甚至品管哲學的重要，特別是當管理員每天面對不少員工，他們能把人際關係的基本哲學，待人接物等哲理與完成優質產品任務結合一起處理，所以這羣員工是推廣品管的核心成員，不過在人數比例來看，他們只是整個機構的一少數，所以高層管理必須正視大部分員工仍停留在品管的被動階段。

上述公司採用西方品管方法，在技術及系統方面得到優異的成績，而在品管哲學方面卻似乎較難被接受，當中意味着一個未得着的環節——就是「品管文化」，由於中西文化有異，個人價值觀不一，以至處事態度及行為舉止都有着東西文化差別，筆者觀察到以上的問題，深深體會到「中學為體，西學為用」的說法，故希望能在香港發展以中國文化為基礎的品質管理，破除現時香港的品管障礙。

香港大學工業及製造系統工程系講師
盧興猷

質量管理哲學



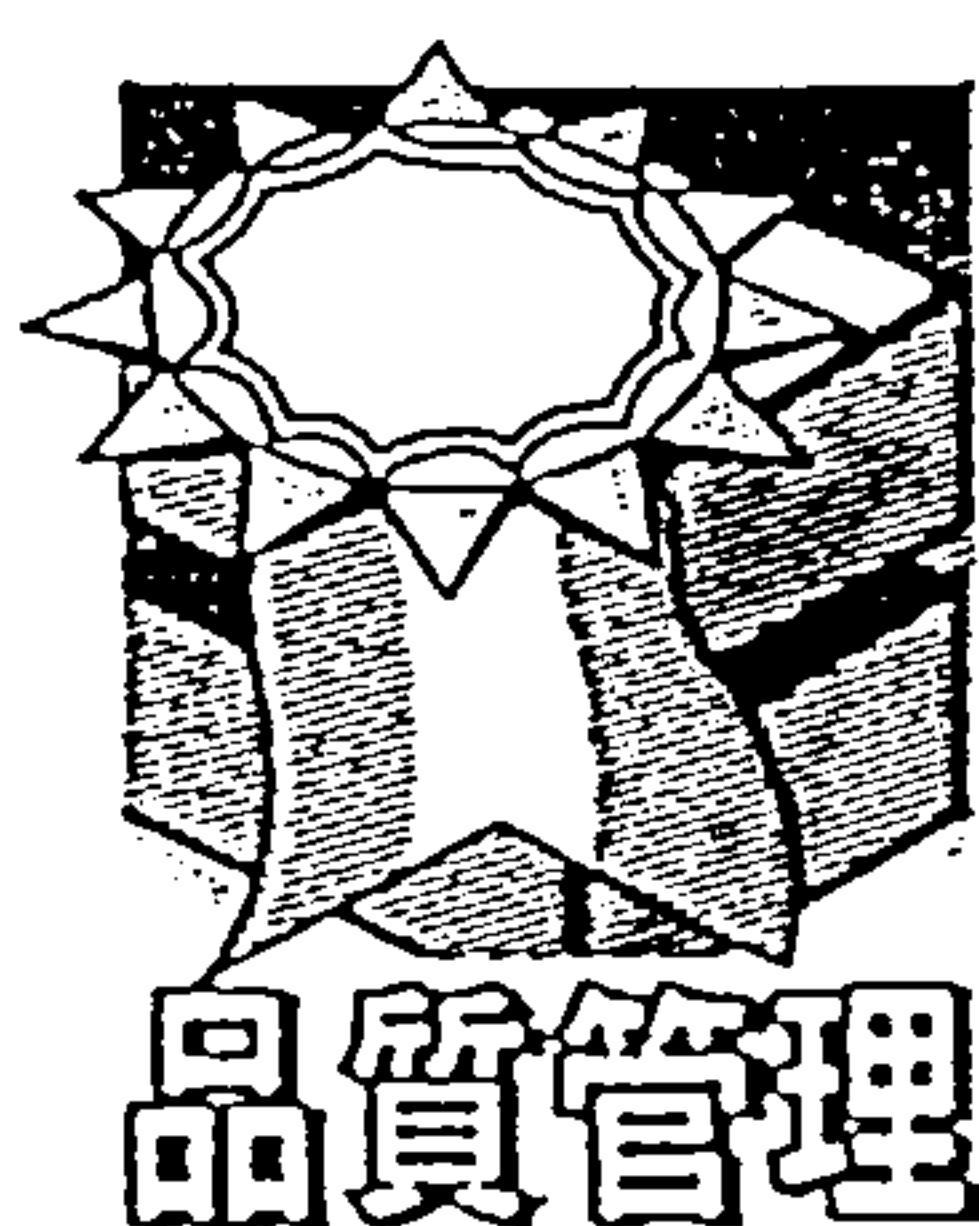
一個理想的品質管理體制可分為三個層面——(一)質量管理哲學——(二)質量管理系統及(三)質量管理工具和技術。

中國歷史文化發展比很多西方國家為早，遠在春秋時代，有「三事」之說，《左傳》文公七年記載晉國的論說「正德，利用，厚生，謂之三事」。從現代質量管理的角度分析，「正德」是將質量的真正意義弄清楚，使上下員工明白企業的質量目標與政策，務求齊心協力，追求質量管理精神意識，「利用」則是採納正確的體系、工具和方法作為推行優質的媒介，而目標就是「厚生」，把個人、企業及國家的經濟提升，這精簡三事的想法卻已經將西方近代的質量管理哲學精華概括起來。

西方的質量管理大師高士比曾以統計六法證明一般企業約百份之八十五的質量問題皆與主管有關，所以便提倡了「主管誠諾」為他的十四改良點之首，他認為主管必須以身作則去追求優質，並認為這是說服員工參與的唯一法門，更強調企業必須定立優質政策並應使全體員工理解及認同，而中國哲學思想在這一方面亦有類似的看法，《孟子、盡心下》有「君子之守，修其身而天下平」之論，孟子把修身視為道德修養的基礎，而修身是儒家倫理思想和道德修養的方法，故企業主管必須先將自己做好，並將其心得推廣至全機構，這正是修身齊家之意，又儒家的八條目更提供了修身的方法，《禮記、大學》有載「欲齊家者，先修其身，欲修其身者，先正其心，欲正其心者，先誠其意，欲誠其意者，先致其知，致知在格物」。南宋朱熹註「心者，身之所主也。誠，實也。意者，心之所發也，實其心之所發，欲其一於善而無自欺也。」今天企業主管的目標是先治家(公司)，然後平治天下(世界市場)。根據大學的說法，主管必須窮事物之理，公司裏大小的質量問題都應誠意地找出其原因，並將真理不自欺地學習，轉為企業的精神，因為只有通過外界事物的認識，才能不斷增加自己對質量管理的能力。《荀子、堯問》謂「見物然後知是非之所在」亦有異曲同工之妙。(續下期)

香港大學工業及製造系統工程系講師盧興獻

中西工業企業 同樣重視品質管理



工業的發展是中國經濟重要命脈之一，而我國的產品是否能被世界市場所接納，便成為了決定工業經濟效益的重要因素。要鞏固「中國製造」的地位和成為極品代號的美譽，我們必須重視工業生產的管理，以及配合世界市場的需求和變化，不斷修正我國企業的運作系統，從而達成中國為工業強國的理想。自黨的十一屆三中全會定下的路線和方針以來，隨着

經濟的發展和開放政策的鼓舞下，我國工企業可以說是展開了新的紀元，我國產品在世界各國的銷售量不斷提高，市場競爭則日見白熱化，我們必須作出深入的了解及大膽的假設，去探討工企業的理想管理模式，發展有中國特色的管理哲學來配合飛躍的經濟發展，這可算是當前急務。

近年西方國家積極推行品質管理的概念和活動，目的是提升工企業的競爭力。美國在一九八七年通過之「鮑德里國家優質管理獎」法案（Malcolm Baldrige National Quality Award），及自一九八八年推出首屆獎項以來，對美國工商業影響至巨，每年獎項均由美國總統親自頒發，各大企業競逐獎項一時成風，數以千計的機構都採用了這個評審的標準作為品質培訓的教材及工企業自我評估和改進的尺度，世界各國都爭相效法，例如澳洲的國家質量大獎（Australian Quality Awards），加拿大的卓越業務大獎中的全面質量獎（Canada Awards for Business Excellence - Total Quality Awards），以及由二十五個國家質量管理協會的代表所

聯合舉辦的「歐洲質量大獎」（The European Quality Awards）等等都喚起了全球對質量管理的熱潮。

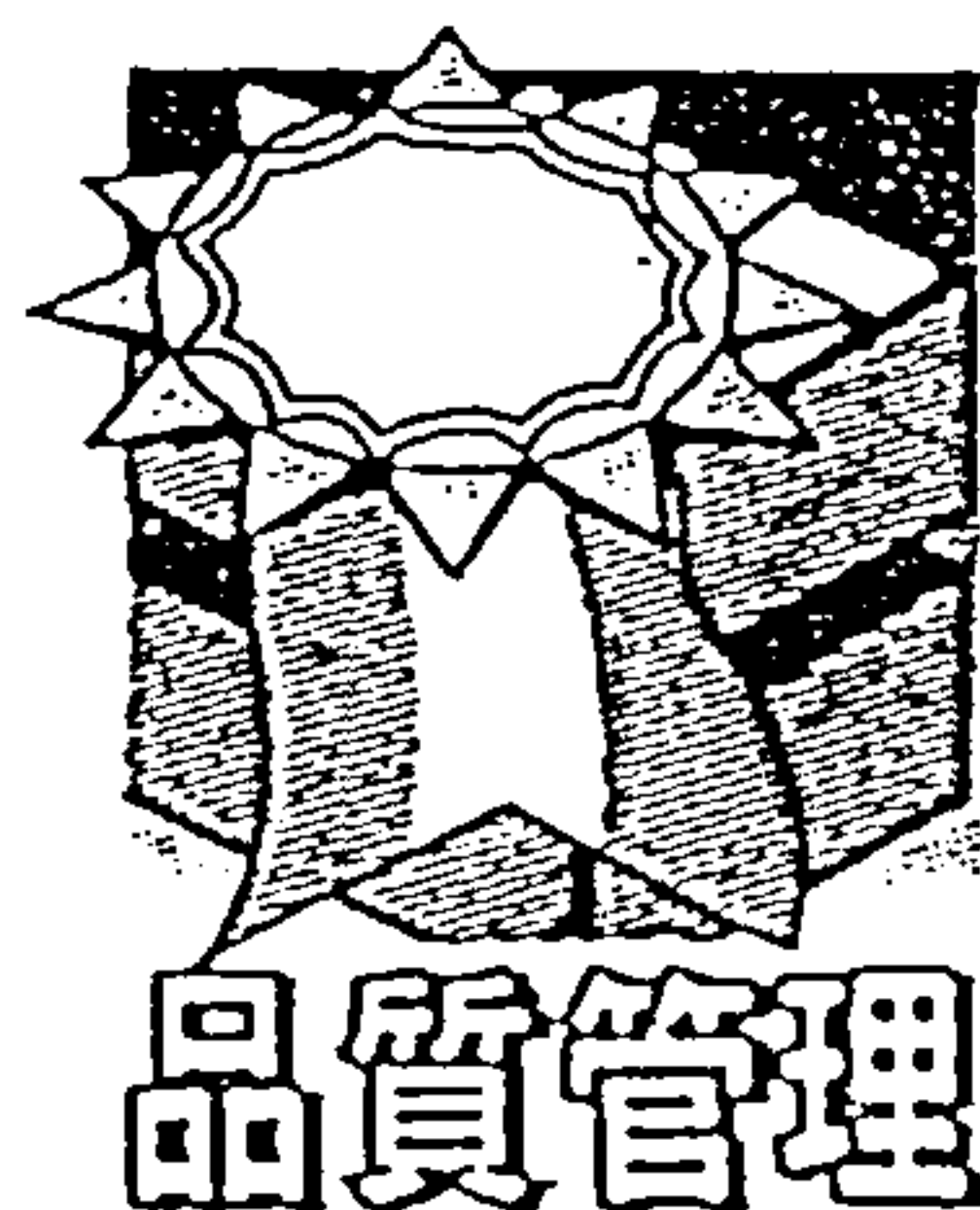
現代具影響力的質量管理著作大部分都來自西方國家，例如戴明博士的〈闖出危機〉（E. Deming - Out of Crisis），朱蘭博士的〈質量控制手冊〉（J. Juran - Quality Control Handbook），菲巴更的〈全面質量控制〉（A. Feigenbaum - Total Quality Control），高士比的〈不流淚的品管〉（Crosby - Quality without Tears），比德斯的〈追求卓越〉（T. Peters - In Search of Excellence）等。

以上所提的均是西方社會對推動品質管理發展的部分過程，然而我們香港處於一個中西文化匯集的地方，一方面受着傳統中國文化影響，另一方面則需適應西方國家在品質的要求，故此在以下數期都會對中國文化在現代品質管理的應用上作討論。

香港大學工業及製造系統工程系講師盧興猷

品質管理哲學

取長捨短溶匯中西文化



「質量的定義從國際化組織」(International Organization for Standardization)(簡稱 IOS)第八四〇二號指南解釋質量(Quality)為「產品或服務所具備的條件，滿足「引申」及「說明」需求的整全能力。」要達到最好效果，我們必須理解質量一詞的真意，同是一個詞彙甚至概念，在不同的環境就可能有不同的意念和理解。

拜倫(R. Baron)認為任何機構的發展，都依靠着共通的價值觀，而該價值觀必須配合當地的固有文化，對「質量」的理解當然亦是價值觀的一部分，物理學家貝爾(J.S Bell)自一九六四年開始研究的「不等式」定理，支持了主觀的「唯心主義」論說，他在一連串的科学實驗裏證明了這個哲學觀點：「月亮在無人看它時確實不存在。」「質量」如要存於國民心目中，就必須讓我們了解「質量」在不同空間的存在形態。

ISO 8402 清晰界定了「質量」的含義在西方與中國人心中都不一定相同，就試想在某個西方國家，將兩個大小，顏色，質料和特徵都一樣球分別放進兩個盒子內，然後將其中一個送到中國某地方，在理論上盒子裏的球是完全一樣，但當任何一方的觀察者打開盒子，看看自己盒子裏的球就能夠斷言與對方所觀察到的是完全一樣的嗎？因此在未了解另一方的內、外在環境，如光度、色溫、觀察方法，運送途中所受的干擾和觀察者的心理狀況等因素之前，是絕對無法下判語的。

西方國家現在流行的質量理論，就有如上述的情況，在不同的條件下，質量就有不同的解釋，不同的觀感，以引致不同的管理手法，所以質量是不適合用「唯物論」的心態去解釋其存在與價值，而「唯心論」卻能解釋質量是與人的思想有着直接的關係，因此在推行質量管理時，就不得不考慮我國的固有文化與西方文化的差異，西方思想在講求質量管理的哲學上，往往以市場競爭為中心，以優勝劣敗為量度尺度，相對而言，與我國哲學的深度比較，似乎甚有距離，中國哲學既深且廣，包涵了人的本質，人的行為能力，羣體與個體，仁與利，君子與小人，天下大同以至平治天下等理論都來得細緻而全面，所以在發展質量管理哲學的過程中，就應捨短取長，將中西文化溶匯貫通，從而建立一套中國現代的質量管理模式及體制。

香港大學工業及製造系統
工程系講師盧興猷

改善品質要點

品質管理之概念在每一個行業都是非常接近的，因為高品質的意思是以現在的資源去做到最好，不過「最好」的定義會隨着時間、地域和人物而改變。達到好品質的方法很多，例如品質圈（QCC），質量功能展開（Quality Function Deployment）及建立品質保證系統（Quality Assurance System）如 ISO 9000 等等。不過無論用甚麼方法去改善品質，機構都需要留意以下幾點：



第一是「以人爲本」——所有的機構都以人組成，當中包括各功能的工作人員與受影響的外界人士，要能達到「最好」，最起碼的是所有有關的員工都能敬業樂業，互相尊重及對工作的成果感到滿意，

反過來說，就算機構有着最好的產品（包括服務），但員工卻未能全情投入，那麼機構整體的質素都不能達到最好，所謂「以人爲本」就是在推行品管的決策上，以「人」爲最終的考慮因素而建立的良好機構文化。

第二是要視乎品質改善爲一項管理藝術——延續「以人爲本」這個概念來說，管理是員工在領導下，完成任務後而獲得滿足感、個人成長及工作樂趣，但要達成以上的效果，並沒有一定的程式，卻往往是靠通過觀察現狀與希望達成的互相比較，環繞着尚未完美的地方，搜集更優良的處理方法不斷思考，從機構的特性而創出適用的對策，所以說品管是一個藝術項目。西方哲學大師亞理士多德認爲管理是應從實踐中學習的，就是說單明白管理的理論，例如知道馬思努（Maslow）的「人慾五層架構」（Hierarchy of Needs）並不困難，但運用在管理上時卻是最需要思考的一環，所以能掌握理論而運用得恰到好處時，那就是管理的藝術了。

第三是必須使全體員工明白及相信品質改善的哲學——在品管方面有不少的口號，例如第一次做好，零不良運作，顧客永遠是對的等，聽起來都不難明白，但要將此等口號轉成每位員工的信念，相信是一個不容易的過程，如果員工未能將心扉打開，讓品管哲理在心裏成長，那麼馬虎了事或陽奉陰違的處事態度將是難避的。

第四是賦予人員能力——有了誠意去做好品質，機構就得提供培訓及時間，讓員工從實踐中去體會經營品質管理，日本品管之父石川博士認爲品質從培訓開始，也從培訓中結束，意味着培訓在推行品管時的重要性。

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「投入結合」與「個人成長」

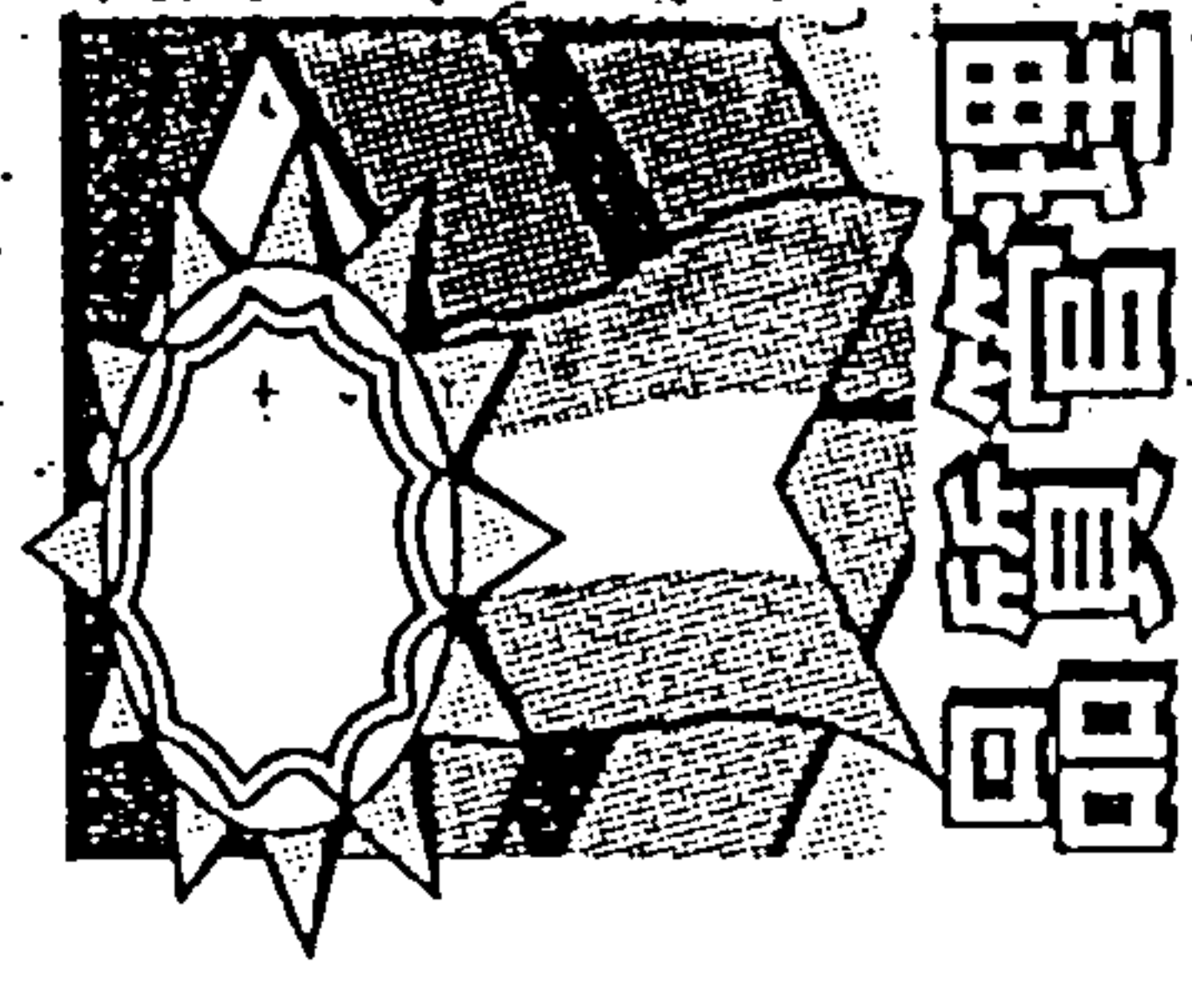
當企業有了明確的品質目標之後，隨之而來的當然就是讓全體員工直接參與實務，以便目標達成，其中員工的「投入結合」便成為全面品質管理的第六個要素，而這個要素的最終目標就是使公司及員工也能共創繁榮，分享成果。

為使員工能對企業全情投入，機構必須提供一個令員工能滿足自我要求及穩定的工作環境，機構對每位員工的工作崗位亦應清楚界定其權力與責任，並能提供適合的方法及足夠的資源去支持員工執行企業對他們的期望及其應盡的義務。

在界定權責時，機構應先將工作流程圖繪畫出來，使工作的要求明確化，然後由管理者與崗位執行者一同商談並考慮有關工作在執行時的切實性；在以上的過程中，屬該工作崗位的供應者和受用者都應參與會談，因為往往執行工作的員工能否着實履行責任是與前工序崗位交來的資料或物料有關，而接着下一環節的受用者亦必須得到合用的資源（以上之詳細概念可參看七月十二日的本欄）才能完成企業的作業計畫。

有了上述的運作基礎後，企業管理者必須將員工從只關注上班的例行工作的層面提升到認同企業品質目標的領域上，又通過灌輸正確的品質意識及引導在品質政策上的思考，使員工於品質文化中自覺或不自覺地遵循着機構的品質原則，而藉着這個「內化」的過程就不難達到「投入結合」的目標。

從員工的角度作出發點就引伸了全面品質管理的第七個要素，就是「個人成長」。筆者曾經進行過一項成功品質要素的研究，調查了一百五十名在職員工，請他們在十個推行品質的關鍵點中依次序排列起來，調查結果約佔近九成員工都以達成個人目標為首要，由此說明了管理階層在推行品質管時，應多考慮員工在工作上的成就感及多提供「個人成長」的機會，例如員工希望在某方面有更高的發展，機構不妨給予員工機會多認識，多學習所需要的有關知識，更讓他們發揮所長，而員工在公司給予的個人成長機會下就必更願意接受挑戰，投入工作。



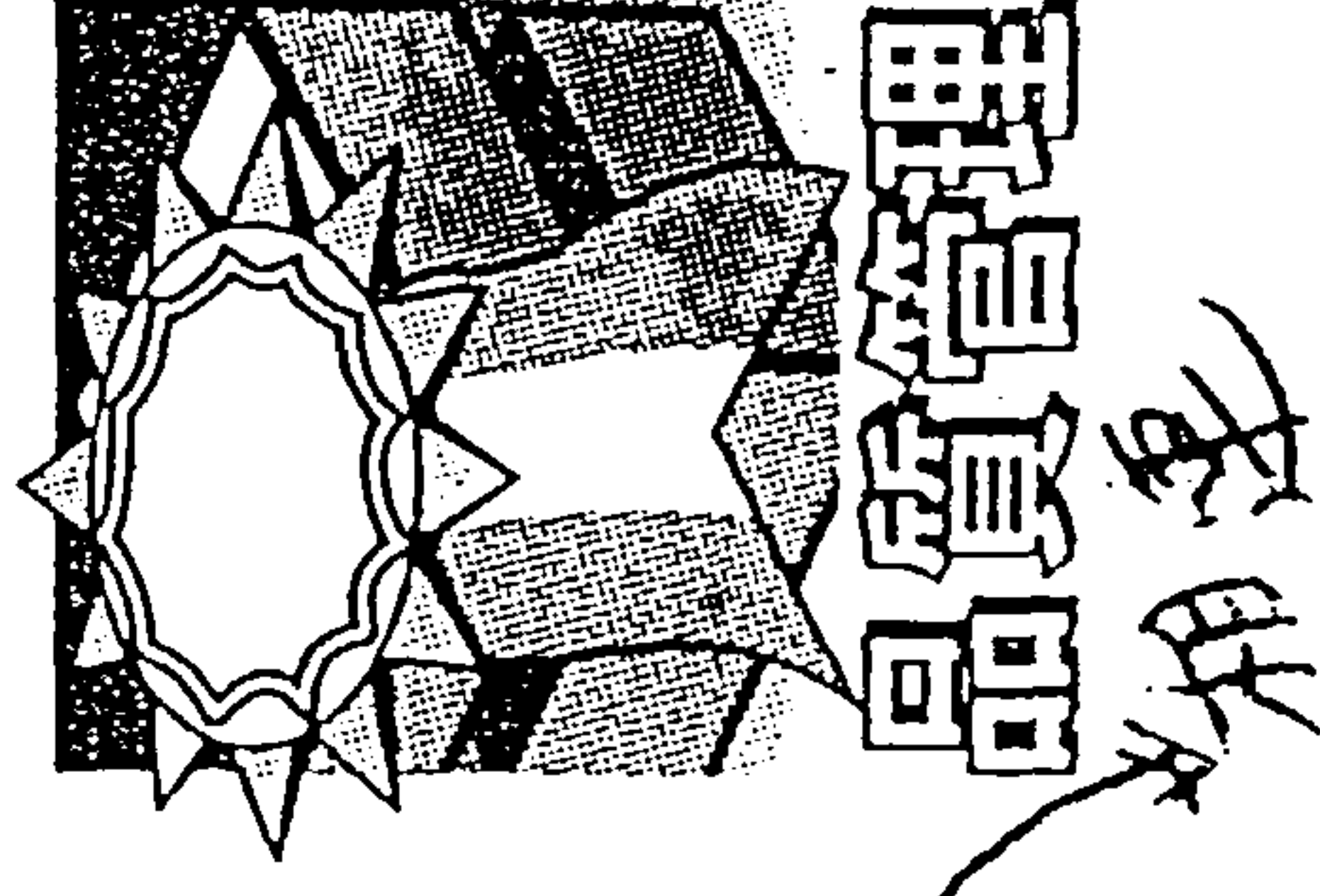
共同參與

全面品質管理哲學的第四個要素是「共同參與」。一人計短，二人計長，團結就是力量是過往開來不錯的定律。要達至全面品質管，企業就應注意加強員工的參與性，中國童謠中的「一枝竹仔易折彎，幾枝竹一札斷折難」就說明了合羣的力量。

今天企業的複雜性極高，分工亦隨着需要而越來越微細，參與企業運作的人數可能達到數百甚至數千人，他們都負責着企業裏不同的工作，就有如一條鐵鏈，一節接一節，而每一段都有其獨立性但又擔負着與鄰節的角色，只要其中一節出了問題，鐵鏈連不成，那麼企業計畫也無法實行，顧客得不到滿意，品質保證就談不上了。

中國人本來就是非常優秀的民族，在聰明才智上絕不遜色，但作者曾聽過一外籍人士評論中國人的一段說話，他說：「以能力而言，一個中國人多會勝於一個日本人，但五個日本人一起工作，卻肯定比五個中國人為佳。」其中含意就一矢中的地道出了中國人缺乏了合羣能力，在現今中國人的社會裏，不少人仍持守着「獨善其身」的思想，在一般企業裏不多人會察覺或提出這弱點加以改進，就算部分有識之士雖有雄心壯志，卻受制於外在環境的限制，根本就沒有條件去開始推行「共同參與」這個理念，更談不上大改革，只有作出想一套，做一套的消極反應。

全面品質管理的傳入，就好像黑暗中的明燈，將企業的不着意轉成為管理的中心點；在中國儒家詞語裏的「以和為貴」就是共同參與的應有態度。其實在日本及歐美各處所推行的TQM，都非常注重如何去培養和諧的工作氣氛，將建立羣體合作視為一種崇高的管理藝術，不斷鑽研人與人之間的溝通、轉變及進取。雖然合羣本來就是人的本性，但卻往往在未有刻意計畫和安排前卻停留在紙上談兵的空想上，所以當管理階層的應趁着TQM這個世界趨勢，憑着中國人豐盛的哲學及優良的文化傳統，積極地去配合全面品質管的潮流，把握機會，將我們企業的弱點作深入分析，大膽假設，小心求證，將過去只保留在心中的幻想，推前到一個務實執行的境界。



香港大學工業及工程系統講師盧興猷

Appendix ES 6

**Quick reference of the 19 Confucian
Principles for Q.M.**

QUICK REFERENCE OF

THE 19 CONFUCIAN PRINCIPLES FOR QUALITY MANAGEMENT

CP1	學而知之	Xue Er Zhi Zhi	Pursuing knowledge through continuous learning
CP2	修身治國	Xiu Shen Zhi Guo	Individual perfectibility as a pre-requisition to management
CP3	以德服人	Yi De Fu Ren	Building leadership through practicing virtue
CP4	以禮治國	Yi Li Zhi Guo	Managing by observing rites
CP5	明分使群	Ming Fen Shi Qun	Understanding the significance of unified strength
CP6	以和爲貴	Yi He Wei Gui	Placing high value on harmony
CP7	尊重天道	Zun Zhong Tian Dao	Respecting the heaven
CP8	中庸之道	Zhong Yong Zhi Dao	Adopting moderation in decision making
CP9	以義生利	Yi Yi Sheng Li	Profit follows righteousness
CP10	反求諸身	Fan Qiu Zhu Shen	Introspecting according to moral spirit
CP11	教之以道	Jiao Zhi Yi Dao	Educating with the moral ‘Tao’
CP12	仁政安人	Ren Zheng An Ren	Using moral perfection as a policy to achieve peacefulness
CP13	天下大同	Tian Xia Da Tong	Applying cosmopolitan relation
CP14	以民爲貴	Yi Min Wei Gui	Placing high value on people
CP15	教之以倫	Jiao Zhi Yi Lun	Following the five basic relationships of people for social stability
CP16	長幼有序	Zhang You You Xu	Using family as a prototype of an organization
CP17	徒法不足	Tu Fa Bu Zu	Laws and regulation are not sufficient to manage an organization
CP18	格物致知	Ge Wu Zhi Zhi	Investigating things and extending knowledge
CP19	勞心者治人	Lao Xin Zhe Zhi Ren	Managing works with brains

Appendix ES 7

**A list of talks and seminars to
industries and institutes**

A LIST OF TALKS AND SEMINARS TO INDUSTRIES AND INSTITUTES

1. "Strategic quality management for small and medium sized manufacturing firms in Hong Kong", International Foundation for Production Research Asia-Pacific Conference Nov., 1994, Japan
2. "Using Quality as Companies Management Strategy", International Conference on Quality and Reliability, Organized by the Quality and Reliability Center, the Nanjing University, the Warwick University, the Hong Kong Polytechnic University and the Hong Kong Government Industry Dept., First International Conference on Quality and Reliability, April, 1995.
3. "Chinese philosophy and education quality", talk given to the Hong Kong Institute of Education, 12 June, 1995 (18 senior teachers who teach Chinese literature and Chinese philosophy participated, a good forum for exchange of ideas and verification of some Chinese philosophical concepts)
4. "Chinese philosophy and quality management", talk given to the Hong Kong Mass Transit Railway Corporation, 3rd August, 1995 (14 participants, including senior managers and engineers. Key discussion area was the interpretation of Confucian principles in a modern management environment)

5. "Chinese philosophy and quality management", talk given to Soabar System (H.K.) Ltd., 27th July, 1995 (12 participants, including an operations director, production and administration managers, technical engineers; exchange ideas on advantages and difficulties of adopting Western and Eastern management concepts in the company)
6. "Chinese philosophy and quality management", talk give to Mattel Toys (Hong Kong) Ltd, 1 August, 1995 (30 participants, including directors, managers and engineers; discussion on the issue of quality improvement through people, and the application of Confucian principles)
7. "Confucian philosophy in quality management --- a DHL report", talk given to the DHL company (DHL executives and managers; discussion on statistical results and the applicability of Confucian principles in the company. Very good feedback, positive and encouraging support to this research, the discussion extended for several hours, 7th December, 1995)
8. "Quality management in Hong Kong", talk given to the Federation of Hong Kong Industries, 7th July, 1995
9. "Chinese philosophy and quality management", talk given to the Chen Hsong Machinery Co., October 14, 1995

10. "Implementing quality management in a Chinese society", talk given to Dow Chemical, October 20, 1995
11. "Implementing quality management in a Chinese society", talk given to the Hong Kong Institute of Engineers, December 13, 1995.
12. "Industrial Engineering in Quality Management", talk given at the South China University of Technology, December 19, 1995
13. "Introduction to implementing Quality Management in a Chinese-based Society" An executive briefing given at SPACE Department, University of Hong Kong, April 10, 1996.

Appendix ES 8

Interviews and reports by local newspapers

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自八十年代開始，「全面品質管理」(Total Quality Management)在美國普及起來，同時這股西風吹至東方，品質管理成為香港不少企業的熱門課題，並且達致國際品質標準(ISO)為榮。

然而，品質管理歸根究底是西方管理的哲學，引入這些品質管理標準固然對提高企業的生產力、增加利潤及開拓市場有一定的裨益。但要推行西方的品質管理概念，對於深受儒家思想所薰陶的中國人來說，是否感到困難呢？

據香港大學工業及製造系統工程系講師盧興欲表示，對於中國人的傳統思想與西方的品質管理如團隊精神，兩者之間是否存有一定的關係感興趣從而作出研究。

若中國人傳統思想及價值觀與品質管理觀念相配合，在推行品質管理會事半功倍。故此，他更以應用中國哲學於品質管理之可行性為研究題目，探討中國人傳統價值觀、儒家理念及品質管理三者之間的關係，從而使中國人的社會更有效地推行品質管理。

兩者存在異同

他個人認為，兩者之間存在若干的關係，中國哲學思想一向強調人與人之間的關係，而生意之道也是講求人際關係。

從個人、小組及公司三個層面探討中國文化及哲學應用品管的問題上，個人層面方面，人的性格、價值觀、常識及學習意願等是配合公司的品質要求。小組方面，團隊合作精神、共同的價值觀及對品質的定義均影響品質管理。

至於公司層面方面，組織的品質文化、品質保證制度及品質管理哲學等對公司推行品管有着巨大的影響。

香港是較受儒家思想影響最深的地方之一，故此研究亦以香港的企業作爲對象；並總結了十九項儒家理念（見附表）。

貫徹管理概念

從這十九項儒家理念對態度、行為等有何影響？

盧興獻指出，其實中國人是了解品質的重要性的，只是工作環境的因素致使未能發揮其效用，故此，有需要喚起公司的管理階層應用中國文化，如「每個人均要做好本份」來推行品質概念。

西方的品管技術較易學習，但最重要是心態能否配合，若應用儒家思想，如「長幼有序」、「尊敬父母」等，相信能更有效地推行品管。

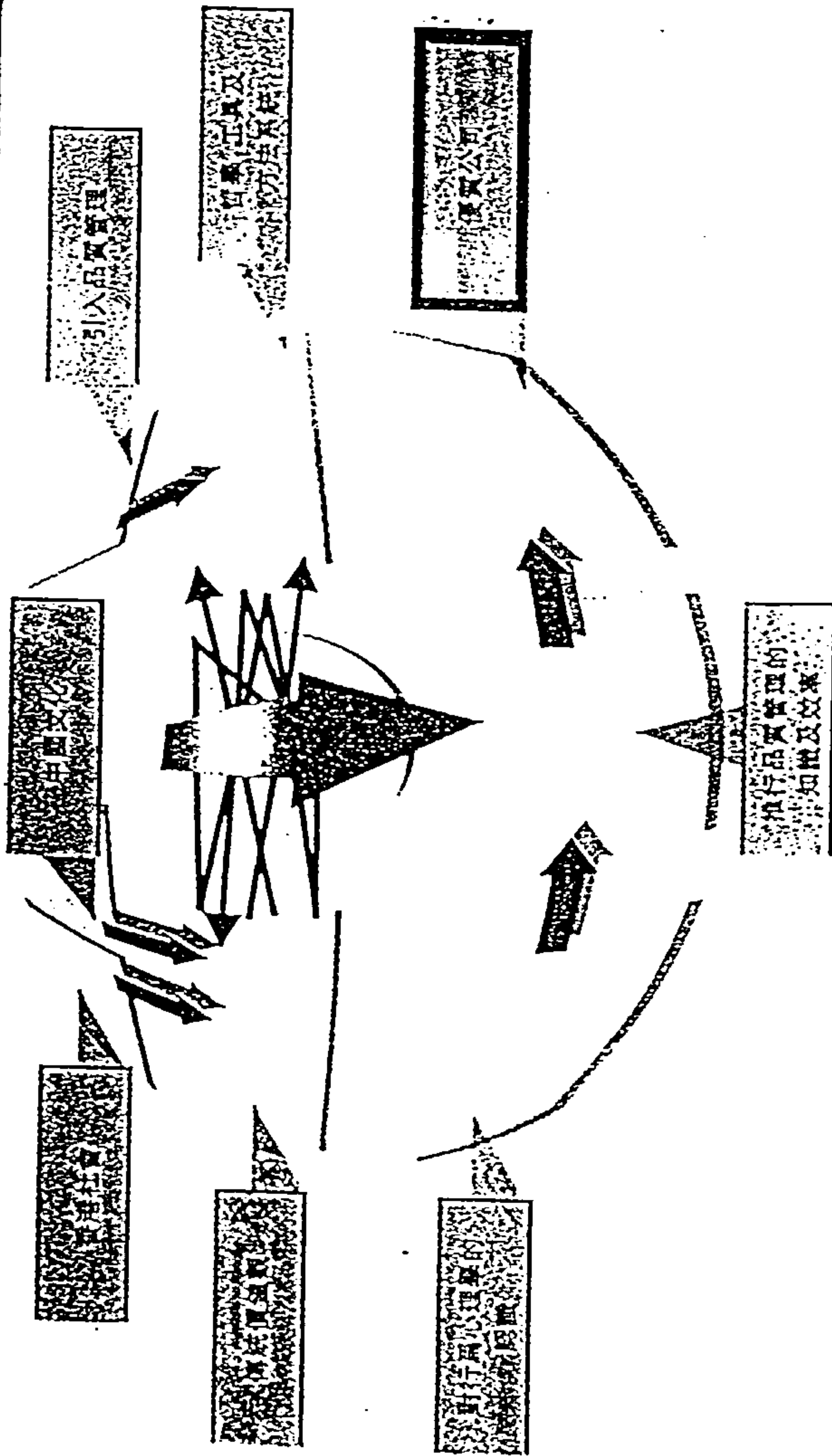
他指出，波雄集團相信是應用儒家思想作管理方法的先驅。

在未來，他希望以中國人的儒家思想貫徹外國管理概念，並實踐品質管理的優越成果。



盧興欽正研究應用中國哲學於產品設計的可行性

在中國人社會推行品質的研究模式



<p>1 學而知之</p> <p>2 修身治國</p> <p>3 以德服人</p> <p>4 以禮治國</p> <p>5 明分使群</p> <p>6 以和為貴</p> <p>7 尊重天道</p> <p>8 中庸之道</p> <p>9 以義生利</p> <p>10 反求諸身</p>	<p>11 教之以道</p> <p>12 仁政安人</p> <p>13 天下大同</p> <p>14 以民為貴</p> <p>15 教之以倫</p> <p>16 長幼有序</p> <p>17 使法不足</p> <p>18 格物致知</p> <p>19 勞心者治人</p>
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結合中國人獨有的作風 品質概念新元素

傳統思想應用於當代品管

四書五經對你來說，相信會有種似熟悉，又陌生的感覺。事實上，對於今時今日的香港管理階層，最常接觸的書籍都是些實用性的「洋書」，從而了解何謂「TQM」、「Quality Circle」等。

不過，有人却從這些被遺忘一角的中國古籍中，拼湊西方的品管概念，研究出「應用中國哲學於品管之可行性」。

中國人社會 品管萬靈丹？

香港大學工業及製造系統工程系講師盧興猷，花了兩年時間，透過找出中國人傳統價值觀、儒家理念及品質管理三者之間的關係，從而希望在中國人的社會裏更有效地推行品質管理。

盧興猷謂，由西方傳來的品質管理學說，品管哲學、工具、方法及系統，最終如何在一間公司裏推行品質管理，這是很多公司管理階層關心的問題。他希望，「應用中國哲學於品管之可行性」的研究，能夠像一個三棱鏡般，在博大而艱深的品管學說中，聚焦出一個有效方法的光譜。

盧氏的調查研究主要分為三部分：(一)中國人的價值觀；(二)儒家學說的重要概念及(三)全面品質管理的標準。

盧興猷表示，根據心理學家康拿（

Connor）的研究，行為是由動機引發；影響動機的則是價值觀。所以調查便由影響人類行為最根深蒂固的價值觀開始，他採用了邦氏（Michael Bonds）的中國價值觀調查（Chinese Value Survey）所歸納出的四十個中國人基礎價值觀。

然後，盧氏與哲學系講師及本地工業界資深的業內人士，總結了十九個儒家學說概念。

最後，採用英國全面品質管理標準的二十七點，完成調查問卷的三個重要內容。

盧興猷將這份厚九頁的問卷，透過隨機抽樣，分發給以中國人為管理階層的公司，總共發出了六百份問卷，並成功收回三分之一。

古智今應用 強化價值觀

這個調查問卷的目的，是將中國人的價值觀、儒家理念及全面品質管理三者融滙貫通。當一間公司在推行品管時發現有困難，就可以從研究所得，尋根究柢，最後找出應該改善或強化哪一方面的價值觀，對症下藥。

問卷收回後，經過初步的分析，盧興猷發覺高級、中級及初級管理人員對品管的概念頗有出入，這些資料可以讓高級管理人員明白，出現差異的原因，從而更有效地推行品管。

曾經有學者研究，在中國人的社會裏面，香港是最受儒家學說影響經濟效益的地區。因此盧興猷的研究，亦是以香港為基礎的。

他相信，儒家理念是一種中國人根深蒂固的思想，若能夠為現今管理階層所用，在中國人的社會裏有效地推行品質管理，將會指日可待。

若讀者有興趣多了解「應用中國哲學於品管之可行性」這個研究，可以參加「品質推廣月」其中的兩個相關研討會（四月十日及四月十九日），費用分別是 \$250 及 \$500，於信德中心西翼 9 樓 21 室舉行。

☐ 盧興猷研究儒家思想在品管上的應用可行性。



香港大學工業及製造系統工程系教授盧興猷(圖)接受本報記者訪問時表示，企業推行品質管理雖然始自



先進，那麼究竟是什麼令其能生產品質優良的產品？原來真正令產品品質獲提升的，是員工的工作態度，因為日本的

香港大學工業及製造系統工程教授盧興猷

盧興猷提倡揉合儒學與品質概念

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西方社會，但他並不以為品質管理在東方社會不曾存在，歷史悠久的萬里長城至今仍屹立不倒即是一例，故只能說中國人對品質概念有淡化的情況。

他認為與其硬生生把西方社會發展的品質管理學說移植在中國人社會裏，不如嘗試把中國固有哲學——儒學，與西方品管結合來應用。清儒撰寫《勸學篇》有云：「中學為體，西學為用。」他相信在中國人社會中推行品質管理亦應如是。

為什麼會有此想法？盧興猷說，大約在八七年時，他曾隨團往日本飛機製造工場作實地考察，發現在日本的製造工場，設備並不比香港或大陸等地

法，並付諸實行。這也即是所謂全面品質管理的要旨。

因此，對中國人而言，以儒家思想誘發中國人互相合作的工作態度最為適合。目前他正嘗試進行一項研究，證明把儒家學說應用於品質管理是可行之道。該研究針對本港六十家製造業公司或以工程為基礎的服務行業，以問卷形式訪問中國人的管理階層，研究把儒家思想應用於品管的可行性。

該問卷以十九間儒家學說來標舉儒家理念，其為：一、學而知之；二、修身治國；三、以德服人；四、以禮治國；五、明分使群；六、以和為貴；七、尊重天道；八、中庸之道；九、以義生利；十、反求諸身；十一、教之以道；十二、仁政安人；十三、天下大同；十四、以民為貴；十五、教之以倫；十六、長幼有序；十七、徒法不足；十八、格物致知；十九、勞心者治人。

他表示，中國儒家思想和西方哲學有很多不同的地方，最主要的分別是中国儒家強調修身以利他的思想為西方所無，故將之應用在品質管理上應有優勝之處。

Appendix ES 9

Project innovation--CD ROM search.

Project innovation--CD ROM search

The innovation requirement of an Eng.D. is emphasized at many places in the Eng.D. Handbook. To ensure that this research will in fact contain some original ideas and innovative applications, the author has conducted a very extensive CD-ROM literature search, covering both the published literature and registers of theses. The search did not reveal any similar nor any directly related research, suggesting that the research done forms an original contribution. Four major databases have been examined to strengthen the author's confidence of the uniqueness of the research. The four databases searched were:

1. Index to Theses

The original source is from the Association of Special Libraries and Information Bureau. The database contains bibliographic information on theses accepted for higher degrees by the universities of Great Britain and Ireland and the Council for National Academic Awards. This information was also published as Index to Theses (UK, ISSN 0073 6066) by Aslib and Export Information Ltd. The database covers all the theses of the above mentioned institutes submitted between the period from 1970 to 1994.

2. Dissertation Abstracts International (DAI)

Dissertation Abstracts is a comprehensive source of dissertation information dating from 1986 to Sept., 1994. The database covers more than 1,200,000 doctoral dissertations and masters' theses; more than 50,000 titles are added each year. Dissertation Abstracts presents work from over 1,000 universities throughout the world, including most North American graduate schools and many European universities. The coverage of the database includes the key fields of "The humanities and social sciences" and "The sciences and engineering."

3. Business Periodicals

The database is published by the University Microfilms international, with global coverage in business and industry. It has over 800 indexed publications and journals, including the Forbes, Fortune, Business Week, etc..

4. Institute of Management International Databases Plus

The database information is provided by the Institute of Management, with comprehensive collection of resources on management in Europe, drawing

together seven sources of 450 U.K., U.S. and European management journals, 22,000 management books and management working papers.

The key words used in searching includes the combinations of the following terms of the two groups:

Group A: Quality, Quality Management, Total Quality Management, Quality Assurance, ISO 9000, Quality Assurance Management System, Management system.

Group B: China /Chinese Philosophy, China / Chinese culture, Confucianism / Confucius, Taoism / Tao, Tai-Chi, Yin-Yang.

All four databases failed to reveal any dissertation tittle, article, or papers from any combination of the two search words groups which repeated any substantial part of the research, reinforcing the author's view that the results of this research are novel and interesting. It seems safe to conclude that the results form a new concept in the application of Chinese culture and philosophies in the process of implementing TQM tools and concepts in a Chinese-based organization.

Project innovation--CD ROM search

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